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Original Articles.

INDICATIONS FOR AND UTILITY OF ALTITUDE TREATMENT IN PULMONARY TUBERCULOSIS.*

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COLORADO SPRINGS.

It is especially useful at the present time to be reminded of what is known of the effects of high climates, because the excitement produced in many physicians by their reception of the idea that the open air, forced feeding and sanatorium treatment are of immense value in arresting phthisis, has caused them, in their eagerness to use these, to them new weapons, to inconsiderately fling away many a proven weapon of the past.

INFLUENCE OF ALTITUDE.

In the consideration of the influence of altitude there are two important matters to be recognized—the physical conditions of the climate and its physiologic effects. The essential distinction of the climate at a high altitude from that at a low level is the diminished barometric pressure. The most notable and important of the permanent effects of this reduced pressure is the influence it exercises on the blood, in producing an increase of red cells and hemoglobin.

While the question is still *sub judice*, I believe the evidence up to date indicates that the increase is an actual total increase of the bulk of the red cells and hemoglobin, and not merely a calling forth of stored-up supplies from the abdominal organs or elsewhere, nor a mere inspissation of blood due to the excessive dryness of the mountain air. I can not further pursue this topic on the present occasion, but would refer you to a study of the experimental work that has been done, especially that of Drs. Schaumann and Rosenquist of Helsingfors.

By what exact process these conditions are produced is still undetermined; nevertheless, the clinical fact remains, that suitable cases of anemia, transported to an altitude, are quickly cured, apparently in a similar way that they may be by the administration of iron, which result in the latter case would seem to be brought about not so much by directly adding the required quantity of iron to the blood, as by the stimulus given to the action of the blood which enables it to absorb its necessary amount of iron from the food once more, as in health.

The effects of altitude on the circulation and respiration are both temporary and permanent. The immediate effect is to increase the rapidity of the heart's action. This rapidity is quickly modified, at least while the visitor is in repose, and during the first four weeks the heart's action gradually becomes once more normal. The blood pressure, which at first is raised, later is permanently lowered. That diminished air pressure will alone produce lowered blood pressure has been abundantly proved by laboratory experiments. In dealing with the cardiac complications that arise in tuberculous subjects, this effect of altitude must be reckoned with.

The immediate influence of altitude on the respiration is to increase the rapidity of the respiratory wave, but this also quickly returns to the normal rate, at least in healthy persons. By exertion the respiration and the rate of the pulse are both increased, not so much in the natives or in persons long resident in high altitudes, as in the case of visitors, in whom they are temporarily more rapid than at the sea level.

The permanent effect of the diminished barometric pressure on the lungs is to increase the depth of the respiration and to expand the air cells so that in children a normal condition resembling emphysema is brought about.

Moreover, the total capacity of the thorax is increased. These effects have been proved by many observations, notably by those of two physicians in the city of Mexico, Drs. Herrera and Lope, who found that the chest measurements of visitors were increased at high elevations, and that those of natives and permanent residents were greater than the average measurements of persons living at sea level. In their valuable book entitled, "La Vie sur les hauts Plateaux," the details are given of numerous measurements of various parts of the bodies of natives, particularly of their chests, and they are compared with similar measurements of natives of countries situated at sea level. Besides these there are detailed many interesting studies of animal and plant life on the high plateaus.

Of course, the extent of this increase in chest capacity in visitors from the lower countries is largely dependent on their youth and the elasticity of their thoraces.

Some interesting experiments by Robin and Binet are recently reported which appear to prove that, contrary to the previous belief, more oxygen is taken in by the consumptive than by the normal man. Up to the present time this statement, however, has not been tested and accepted by other observers; thus we do not know positively whether the diminished oxygen pressure to which a man is subjected on his transportation to a high plateau or mountain is of advantage to him, either directly or indirectly. It is possible that the diminished amount of oxygen may be of benefit by lessening the

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burning up of tissue apart from the effect it is believed to have in causing increased respiratory action.

As a consequence of the dryness of the air in high climates there is more evaporation from the lungs and skin, and a lessened loss of water through the kidneys and bowels. The amount of water excreted and evaporated from the body, however, after a time becomes normal. But on the first arrival of patients at high altitudes it is customary to find that there is a greater amount of solids in the urine than under ordinary circumstances at lower levels, which is doubtless due to this increased evaporation from the lungs which occurs during all seasons and from the skin also when the air is warm.

The beneficial effects of sunlight are very marked on various diseases; and at high altitudes sunlight is very abundant, prolonged and intense. Generally speaking, it is healthful, though too exciting and irritating for some patients.

The question of air temperature is always of great importance; it varies, of course, at different altitudes, but at all altitudes there are found in varying degrees cool nights and warm days, with cool air and warm sunshine. The old idea was that for a climate to be beneficial, especially for the phthisical, it must be equable. Now, however, it is recognized that the great change of temperature, from day to night, is of the greatest value to many invalids, its action on the body being very much the same as a cold douche following a hot bath. It has undoubtedly much the same effect that cold bathing has in typhoid fever; it braces the nervous system and stimulates the nutritive processes.

The aseptic condition of the air is also of importance. At most altitude resorts there are few dwellings, few crops and the population is sparse; so for these reasons the air is pure, which is obviously an advantage.

These are the main points in regard to the influence which altitude exercises therapeutically. There are, however, different degrees and kinds of altitudes. These may be divided into three classes: Cold, warm and hot. The difference in this respect, while dependent in a measure upon latitude, is still more largely a matter of altitude. As a rule the higher the elevation the cooler is the atmosphere. But this rule is modified in accordance with the position of the altitude in relation to the equator. For instance, the Swiss Alps are colder than the same altitude in Colorado. When it is thought desirable to modify the temperature it is generally necessary, in order to do this, to change the altitude. The two things usually go together. The configuration of the ground is also of importance, that is, its topography has to be taken into account, namely, whether a place is situated in a valley, on a plateau or on the side of a mountain, and whether the natural as well as the artificial drainage is good.

AMERICAN AND SWISS CLIMATES.

Speaking broadly of the matter of temperature and altitude, it may be said that on this continent we find the more extremely cold elevations in Canada, although they have so far been but little used, but in these regions are places that compare favorably in climate though not in resources with some of the most frequented resorts of the Swiss Alps. On the other hand, there are ready and much used the lower elevations and warmer climates of Arizona and New Mexico; and between them are the varying altitudes and medium temperatures of Colorado.

As the cold regions this side of the Atlantic have not been much frequented by invalids, we must go to Europe for the purposes of comparison. The Alps have the disadvantage of limited hours of sunshine, while they have the advantage of less wind and dust. At the other end of the pole take Arizona. It has the advantage, for some patients at least, of increased warmth and moderate elevation, coupled with great dryness and no great variations of weather. At the same time it has the disadvantage of having more dust and the more enervating conditions which come with heat. Colorado, as has been said, lies between the two.

In the Swiss Alps the summers are very pleasant, although the winters are usually preferable for the treatment of tuberculous patients. For persons in ordinary health the summers at the altitudes are admirable, but they are more rainy than the winters, and tuberculous patients do not seem to do so well as in the latter season. In Arizona the heat is too great in the summer to make it wise to leave most patients there at that season; although some undoubtedly thrive under the parching heat. In the resorts of Colorado is found something intermediate between the two. In the latter there is a winter climate which is more suitable for outdoor life than the sheltered parts of colder regions; but at the same time there is more wind and greater range of temperature. It is not suited to advanced cases or to enfeebled persons who can not take exercise. For young, vigorous persons, and in fact for all who can spend a large portion of their time out of doors, and who can take moderate exercise, an immense advantage will be found to arise from these very changes in the temperature.

CLASSIFICATION OF PATIENTS.

As to the classes of patients who should be sent to high altitudes, many things have to be carefully considered. The first matter to be inquired into is: Why did the patient become tuberculous? Although the bacillus is the central fact in the process of tuberculosis, the germ behaves differently in different persons, and the disease may arise from different predisposing causes. Apart from the introduction of the bacillus the general condition of the patient's health is of importance.

Tuberculous patients may be divided for the sake of convenience into three classes: The purely tuberculous, the catarrhal and the pneumonic. Of course these terms are subject to misunderstanding and abuse, because all these patients are ultimately tuberculous and there is present in each more or less catarrh or inflammation; nevertheless, I have found the division on the whole the most convenient for use. The important thing is to distinguish between cases that can be traced to definite causes and those cases in which the tuberculosis has arisen without any apparent cause, coming like lightning out of a clear sky. Such may be regarded as original cases of tuberculosis; these as a rule do well in a climate like that of Colorado. They need a stimulus, and when handled with discretion are generally benefited more markedly by the altitude treatment than by any other therapeutic measure, climatic or otherwise, provided the general hygienic care is equally good. Catarrhal cases—those subject to catarrhal conditions of the respiratory tract on slight cause—have generally behind them some fault in the metabolism; there are usually also existing in such patients deficiencies of construction which make them more liable to these attacks. They are particularly susceptible to weather, more especially changeable weather. Therefore, you have to be very careful with them in climates like Colo-

rado, and the majority do better in the equally dry but warmer and less elevated climates of New Mexico and Arizona. Then there are the pneumonic cases—those in whom there is considerable febrile reaction to the disease and in whom an inflammatory process has been set up. Cases of this kind are not so well suited to the higher ground. The air is apt to be too stimulating for them. They usually improve more satisfactorily lower down and in a moister air. Of course, all of these cases come to us more or less mixed, but my experience is, that if you can trace the history of your patient you will generally find something to guide you in caring for the case. Therefore, I consider that the taking of the history of the patient is of great value in shaping his treatment.

The mental condition of the patient must also be taken into account in sending him away from home. The possibility of his being affected by homesickness must be considered. It is important, therefore, to know something about the habits of your patient. For example, a person who never enjoys traveling, and is always longing for his own fireside, is far better left at home, unless you can arouse his attention towards his new surroundings and contrive to make them interesting to him. I remember one man who could not get well in Colorado because he pined for his unhealthy life in Philadelphia and sadly missed, he quaintly said, "even the stink of the all-pervading gas." On the other hand, there are those who enjoy the change. In all therapeutic measures change of mental attitude is an important factor, but you can not hope to do anything to influence it unless you understand your patient.

The question of social condition is likewise important. It may be said that there are three classes of patients: The rich, the comparatively well-to-do, and the poor and laboring class. The rich are benefited as a rule by being sent to higher altitudes, other conditions being appropriate, because this is generally the greatest change that can be given them. They have presumably been living under good hygienic conditions, and the greater the change climatically they can be given, the greater is likely to be the effect on mind and body. With the well-to-do, who are accustomed to be continually occupied, it is sometimes a serious question whether it is desirable to put them in a place where they can have no occupation. It is important that the physician should direct their minds into new channels of thought and give them new ways of occupying their time. I do not mean necessarily remunerative ones, but something that will occupy their time while it excites their interest and makes them happy and comfortable. Among the poorer class of patients, those who have been used to labor out of doors, will generally be found to do better than those who have followed indoor occupations. The former can generally be set to some work that will keep them interested. The indoor laborers are more difficult to deal with and the outlook for their recovery is not as encouraging. Still, they are not, for these reasons, necessarily barred from altitude treatment.

Other matters which must be considered before the decision is made to send a patient away from home for climatic change, are the special symptoms of the disease and the stage to which it has advanced. Physicians at altitudes, like their confrères in all other resorts, always demand that patients should be sent to them at the earliest possible stage. While this condition is always to be preferred, removal to an altitude need not necessarily be made at an early stage.

There is no reason why cavity cases of moderate extent and even of long standing should not go to altitudes, other conditions being suitable; but all cases which are deteriorating rapidly ought to be first treated like hospital patients suffering from any other acute disease. Afterwards certain of such cases can be sent to an altitude with much advantage.

Hemoptysis is not necessarily a bar. At the recent meeting of the American Climatological Association at Niagara Falls, Dr. Bonney, of Denver, read an important paper in which he confirmed the conclusions that several of us had arrived at from our own observations, viz., that hemorrhage cases do no worse at an altitude than elsewhere and probably better, and that the fact of their bleeding is not of itself an argument against sending them to a high climate. Another important thing is for physicians at home to study their cases thoroughly before sending them away for climatic change. In this connection I think the state institutions and other home sanatoria that are now springing up everywhere will be of immense value. From these institutions we may expect to have more and more well-selected cases sent to high altitudes with the greater certainty of good results.

Finally, let us remember the oft-quoted dictum that it is not only the individual sickness we have to consider, but also the sick individual.

ADAPTABILITY OF SOUTHERN CALIFORNIA AND SIMILAR CLIMATES TO THE NEEDS OF CONSUMPTIVES.*

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When we speak of Southern California as a climate, or a place to live, we usually mean that part of the country lying between the ocean and a range of mountains forming an irregular semicircle and extending from a point near to and north of Santa Barbara to a point some miles back of San Diego. We do not mean the Colorado desert lying east of this mountain range, nor the Mojave desert north of it, although they are both geographically in Southern California.

The climate, then, of Southern California is, to some degree, adaptable for consumptives because it has: 1, relative dryness; 2, small rainfall; 3, large degree of sunshine; 4, low and high altitudes; 5, mildness of climate throughout the year, permitting outdoor life; 6, low barometer range, and finally, 7, a good record in tuberculous cases. These conditions are generally regarded as important for consumptives. They all probably have advantages, although some of these are wrongly explained and some overestimated.

For example, dryness is supposed to be beneficial by reducing expectoration. For this reason it is probably actually harmful, by increasing the retention and tenacity of the expectoration. It can not be harmful to have enough moisture in phlegm to cause it to be easily moved through tubes, and excessive dryness prevents this. Dryness is valuable, because it lessens the cough and so increases the quiescence of the lung tissue, which is a consideration of the greatest possible importance. A moist climate is thought by many to be very injurious to consumptives, yet many cases recover at San Diego and

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Santa Barbara, both on the Pacific coast, and also in the Sandwich Islands, surrounded by the ocean, as well as on shipboard at sea.

High altitudes doubtless help some consumptives, but not by expanding the air vesicles of the diseased tissue. This is harmful and ought to be discouraged. The value must be in the effect on the red corpuscles, and some of the other and cognate changes in the physiologic conditions and forces. Low altitudes give more oxygen in the air breathed and less perturbation from low barometric pressure than high ones do.

The air in Southern California is relatively dry as compared with the middle and eastern parts of the country. The dryest region is, of course, farthest from the coast. The mean relative humidity is, by comparison with other representative places, as follows, expressed in percentages of saturation: Chicago, 72; Denver, 53; San Diego, 69; Los Angeles, 66; Southern California foothills (Pasadena to Redlands and Riverside), 64.4 to 65; Yuma, 46, and Prescott, 74.

The record of the actual amount of water dissolved in the air of these places, by comparison with the relative dryness, presents what at first seems to be a puzzle. What is relatively dry may be actually moist. It is rational enough, however, when we consider the laws of meteorology; and it shows how our calculations in the management of the sick are based wholly on the relative and not the actual dryness of the air.

We find that the mean amounts of water in the air of the places named—expressed in grains of water to the cubic foot of air—are as follows: Chicago, 2.80; Denver, 2.14; San Diego, 4.19; Los Angeles, 4.00; foothills, unrecorded; Yuma, 4.12, and Prescott, 2.20.

Thus Prescott, which has the highest relative moisture of all the places given—74 per cent. of saturation—has a very small degree of real humidity; and Yuma, which has the lowest relative humidity, carries more water per cubic foot of air than Los Angeles or Chicago, and almost as much as San Diego.

The rainfall record shows Southern California to have a small amount of precipitation. The rains come mostly from December to April inclusive. The number of days of falling weather are, even through these months, fewer than in the East. The annual rainfall in Los Angeles and the average of the eastern foothills—Redlands, Riverside and San Bernardino—is 15 inches. This is the same as at Denver, while the western foothills—Sierra Madre, Pasadena—have 16 inches, and San Diego has but 10 inches.

The relative degree of cloudiness and sunshine is usually reckoned as an element in the general question of humidity. It is more an element in the mildness of a climate. The mean percentages of cloudiness by day of the places named are as follows: Chicago, 51; Denver, 38; San Diego, 42; Los Angeles, 34; western foothills, 30; eastern foothills, 28.9; Prescott, 24, and Yuma, 17.

The altitudes of Southern California are mostly low, from sea level to 1500 feet at the foothills near the mountains. If low altitudes are unadapted to consumptives, then these regions are objectionable. Los Angeles has an elevation of 300 feet; Pasadena, 800; Sierra Madre, Altadena, Redlands, Riverside and the Ojai valley from 1000 to 1500 feet. But there are regions of high altitude where patients are often sent for variable periods, with more or less benefit. One of these is the mountain resorts back of Pasadena, including Wilson's Peak, Echo Mountain and Alpine Tavern, whose altitudes vary from 3500 to 6000 feet. Another place that has been a resort for a few patients for many years is Strawberry Valley, in the San Jacinto mountains, lying southeast from Riverside and being on the divide between the coast plateau to the west and the Colorado desert to the east; it looks down upon Indio and is the dry desert resort for consumptives. The elevation of Strawberry Valley is 5000 feet. This is an ideal place for the sick, but has the disadvantage that it is reached only by a stage ride of twenty miles from San Jacinto station on the Santa Fe railway. A powerful and speedy automobile service has been introduced, and it is hoped will make this journey much less objectionable.

The weather in Strawberry Valley is much like that of the mountains of Colorado, with occasional showers during the summer and some snow in the winter; the temperature ranges from 20 degrees on the coldest nights of winter to 85 or 90 in midday of the hottest days of summer. The scenery reminds one of the White Mountains of New Hampshire. The California Health Resort Company, Los Angeles, has acquired a large tract of land in this valley and has just finished the construction of a sanatorium which will accommodate a large number of patients, whom, it is expected, will be mostly of the tuberculous class. The plans and regulations of the company indicate a sanatorium on the plan of those of Sharon and Rutland in Massachusetts, and of the better class of those of Europe. So much money has been invested in the enterprise that the company can not afford to drop in its standard of management, and it is promised to the profession that in the care of the patients the directions and wishes of the attending physicians who send patients shall be carried out in their management as far as possible, consistent with certain definite rules of the institution as to fresh air, outdoor life, supervision of exercise, rest and amusements, as well as the dietary and feeding. The water supply of the place is perfect and in the construction of the sanatorium every provision known to good hygiene seems to have beeen carried out.

The one quality in which the climate of Southern California is pre-eminent is its mildness and the ease with which one can live out of doors most of the time, both day and night, and during all seasons of the year. A dozen days of rain and as many of high wind are about all that need keep any patient wholly indoors, and, even in these days, he may have perfect ventilation of his room. There is nearly every day a breeze from the ocean during the day and one down from the mountains at night.

Occasionally, on a winter's night, the temperature drops for an hour or two slightly below freezing point, and during most of the days of winter and many of those of spring warm wraps and overcoats are acceptable at all times of the day. The warmer days of summer are, from 10 to 5 o'clock, sometimes very warm as shown by the thermometer, the temperature ranging from 85 at the coast to 102 at the eastern foothills—those farthest from the ocean; but to the human body properly clothed these temperatures are never experienced. With thin and light-colored clothes and hat, you would guess any day that a temperature of 100 was 85 or 90. Within twenty or thirty miles of the coast invalids are rarely uncomfortable from heat in summer even for an hour. The diathermancy of the atmosphere, due to dryness, especially some miles inland from the coast, is so great—particularly in summer-time—that the sensible as well as the real temperature of the air drops quickly as soon as the sun goes out of sight, whether under a cloud or at night. This fact makes it necessary to change one's clothing or

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wraps much more often than is necessary in the East.

Mean temperatures are somewhat unenlightening as to the question of physical comfort at times of extreme fluctuations, but they are worth considerable by comparison. Mean temperatures of summer and winter are shown by the following table:

	Summer.	Winter.
Chicago	68	22
Denver	69	29
Prescott	70	37
Yuma	90	55
Los Angeles	69	54
San Diego	68	54
Eastern foothills	75.3	54.7
Western foothills	71	52.6

I can not doubt that the slight fluctuation of the barometer in Southern California is an advantage to the sick. The fluctuations in the barometer in Southern California are not more than half what they are in the eastern part of the country. A daily journey up and down a mountain gives one fluctuations in the barometric pressure, and such an exercise is not thought to be harmful. But a sudden drop in the pressure will often give one a neuralgic or so-called rheumatic pain and disagreeable and depressed feelings. Some evidence has been accumulated in the past to show that at times of low barometer patients recover less rapidly and bear surgical operations less well. Fluctuations in air pressure are of doubtful value in any sickness unless prescribed for the particular case.

Finally, the experience of the past is valuable and beyond controversy. A large number of patients have recovered from tuberculosis in Southern California and have remained for many years with all the appearances of health. How large a proportion of those who have gone there with the disease have recovered nobody can tell. That this climate is better for consumption than some others in the United States, I would not pretend to say. But I know that experience has proved its great value, and the experience has justified the theory that most of the climatic benefit that ever comes to this pathetic class of patients is due to their ability to live practically out of doors a large part of the time, night and day. This is a doctrine, too, that to my mind has the support of common sense.

NINETEEN YEARS' EXPERIENCE WITH CREOSOTE IN TUBERCULOSIS.*

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The general who has a difficult battle in contemplation not only surveys the ground and counts his men, but selects his best gun and places it at advantageous points, where it will not only offer the greatest protection to his men, but do its most effectual carnage to the enemy. Other things being equal, success or failure in the treatment of pulmonary tuberculosis depends largely upon a judicious selection and proper administration of creosote.

Being located as I am, at a point where a very large number of tubercular patients are directed by the best physicians of the country, I have a good opportunity to obtain a fairly correct opinion of the profession's confidence in creosote. My records for the past nineteen years, of 2183 cases of tuberculosis, scattered from all points of the United States and the provinces of Canada, show that thirteen out of every fifteen patients were either taking creosote or had had it prescribed. These statistics are of value in arriving at a consensus of opinion of the profession to-day, when we observe that for the last seven years of this record, embracing more than one-half of the cases, seventeen out of eighteen were either taking creosote or had had it prescribed.

Much of the prejudice of the laity and disappointment to the physician in the use of creosote is due to the administration of an impure article. While it is noted that the bulk and file of these unfortunates are taking creosote, it is observed that so little attention is paid to its purity that many are getting nothing short of carbolic acid or a true wood product. No plain beechwood or any other wood creosote should ever be administered by stomach or applied locally. Creosote made by a double distillation from beechwood tar is practically free from carbolic acid and all other impurities; it possesses the greatest antiseptic and germicidal properties, and at the same time there is an absence of all nauseating, irritating and escharotic effect.

Mr. Thomas Morson's test is simple and satisfactory. It consists in the solvent power of glycerin over carbolic acid, which is dissolved by it in all proportions, while pure creosote is insoluble in glycerin, or nearly so, while carbolic acid is dissolved by it in all proportions. Consequently, if any liquid assumed to be creosote dissolves largely in glycerin it probably consists in whole or in large part of carbolic acid.

Creosote made by the double distillation of tar from beechwood, complying with the Morson test, can be administered in enormously large doses in the most delicate stomach, with decided clinical success. Rarely do patients come under my care who are taking more than 5 to 10 minims, which is certainly too small a quantity to be of decided value in the management of the tubercular; these small doses do a little good where there exists a feeble digestive apparatus, by partially preventing fermentation and thereby assisting digestion, but beyond this, in these small doses any beneficial effect upon the course of the disease is highly improbable. It is only in the large doses of creosote, from 60 to 100 minims three times daily by the mouth, and a local application to the lungs of 15 to 20 minims daily, that we recognize in this drug a well-nigh specific influence in pulmonary tuberculosis.

Creosote is best administered in either cod-liver oil, whisky or cream. Manufacturing druggists in recent years have a fad of combining creosote with many of their wares; it goes without comment that these preparations are of but little benefit, as the quantity of creosote is insufficient and quality questionable. Creosote should never be administered in capsules unless combined with an oil, and then the bulk or number of capsules would be objectionable. I have systematically used creosote subcutaneously in tubercular subjects, without observing any advantage over administering by stomach. One part of creosote to two of oil of sweet almond was the strength used, and in no instance have these injections given trouble. This mode of administering is sometimes admissible when a concentrated local effect of the drug is desirable or where there exists an idiosyncrasy or aversion by mouth.

In all cases of laryngeal and pulmonary tuberculosis, 20 to 25 minims of creosote in some hydrocarbon oil can and should be forced down into the lungs daily.

The drug must always be administered on a full

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stomach three times daily, commencing with 20 minims and increasing 1 minim daily until 60 is reached. Hold the dose at this point for one month, then drop back to 40 minims and start up again until 80 minims are reached, holding at this dose for a time. The process is repeated again when 100 minims or even more is reached and the patient held at this point for months or years, in the discretion of the physician. Rarely do I consider it safe for a patient to stop creosote until at least two years after all symptoms of the disease have subsided. As a matter of course, emergencies may arise in any case, contra-indicating its use for a short period, but in the main I wish to impress the importance of a long-continued use of the drug after the patient is seemingly well. A strict uniform observance of this point will prevent many relapses and strengthen the doctor's faith in the ultimate curability of consumption.

Creosote prevents fermentation in the alimentary tract, at the same time it stimulates a better flow of digestive fluids, and allows a disabled organ the time, which it lacked in vigor, to accomplish a physiologic process. Large doses of creosote stimulates respiration, increases oxidation, makes more red blood, gives better nutrition to the tissues of the body and renders a soil less desirable for germ life.

Creosote is largely eliminated by the lungs and kidneys, and, from this very fact, we recognize in this drug a valuable remedy in tuberculosis of these organs. Large doses of creosote, with rest and diet, in tubercular nephritis offers a rational plan of treatment, which is unexcelled. In these large doses I have yet to observe a single instance of renal disturbance, notwithstanding the warning uniformly thrown out by authors.

Creosote has the power of controlling tubercular fever in the incipient or congested stage, as well as in the suppurative stage. By the large doses in the incipient stage the inflammatory area is limited and circumscribed. In the suppurative stage it is not only limited by the large doses, preventing further tissue complications, but creosote thrown down into bronchial tubes and cavities destroys the pus germs, which causes the septic fever.

A married female, 28 years of age, having been located in a good climate eighteen months, with a shot of an attenuated tuberculin every two or three days, presented herself at my office with a temperature chart of the last six months of her illness; the temperature at 5 p. m. had rarely been below 101 and most frequently ranged to 104. She had lost much flesh from tissue metamorphosis and tubercular sepsis. The tuberculin was stopped and the patient was placed upon a strict diet of scraped beef, cream and eggs, with 90 minims of creosote three times daily and with 25 to 30 minims of hydrocarbon oil forced down the bronchial tubes into the lungs daily. A drop in the temperature was noticed the first afternoon following the treatment; at the expiration of twelve days' treatment the afternoon temperature had dropped to 99. She has now been under treatment for ten weeks, with somewhat increased amount of creosote, and at no time since the twelfth day has her temperature been above 99. The cough and expectoration, with all constitutional symptoms, are greatly improved and she has gained sixteen pounds in flesh. It has not been my pleasure to observe in very many cases such prompt and decided lowering of temperature, yet all cases amenable to treatment will show a perceptible reduction of temperature almost from the start with a cessation of loss of weight.

Creosote is not the only drug that is of value, but it plays a part and exerts an influence in tuberculosis that no other drug does; its influence over this dreaded disease is well-nigh that of a specific, if administered in the incipient stage, other things being equal, viz., climate, diet, and rest of mind and body.

With large doses of creosote by the stomach, and locally in a hydrocarbon oil, it is beautiful to watch the appetite and digestion improve, the heart's action coming down, night sweats ceasing, cough and expectoration decreasing, with a return of vigor, strength and general good spirits born of hope, and a consciousness of decided substantial improvement; happiness, obedience and gratitude come hand in hand with the improvement.

DEDUCTIONS.

1. Selection of a creosote made by the double distillation of tar from beechwood is essential. 2. Large doses continued indefinitely do not irritate the stomach, but improve digestion. 3. Large doses are appropriated by the system as shown by clinical observations. 4. The drug in large doses is indicated in all stages of the disease. 5. For permanent results the drug in large doses should be continued for months after the absence of all physical signs or constitutional disturbance. 6. Creosote in large, continued doses is not only the most rational treatment, but gives the best clinical results of any one agent familiar to clinicians.

DISCUSSION IN SYMPOSIUM ON TUBERCULOSIS.

DR. DE LANCEY ROCHESTER, Buffalo—The speaker had sent several cases to Colorado last winter and recalled one case of a man, who weighed only 168 pounds, suffering with tuberculosis, and who, after remaining in Colorado six months, now weighs 208 pounds. Every case that he had sent had improved in the climate of Colorado. He felt that he could add nothing to what Dr. Solly had said, except to emphasize his remarks upon the value of altitude in the treatment of pulmonary tuberculosis.

He approved of creosote. In the city of Buffalo the climate is not a very good one for consumptives, but he recalled five cases, two men and three women, living in tenements, under bad hygienic conditions, which he had cured with creosote in very large doses. He commenced with small doses and ran it up to 4 c.c. at a dose, three or four times a day. The value of this treatment can not be denied. He had found that he gets much better results from plain beechwood creosote than from guaiacol or any of the other drugs which have been used as substitutes for creosote. The best vehicle for administration is weak mucilage water. He had never had any difficulty with his patients about taking the drug. He instructed his patients to buy their gum acacia and make their fresh mucilage solution at the time of taking the dose. He had never observed any ill effects from these large doses of creosote upon any of the organs of the body. He would also emphasize the remarks of Dr. Bridge about keeping the lung at rest. Much harm has been done by pulmonary gymnastics during the active stage of the disease. The theory is wrong and he had obtained better results by keeping the lung at rest. After the patient has recovered, and has been without fever and other symptoms for a month, and all signs of the active process have disappeared and the physical signs are simply those of sclerosis, then we can begin with the hope of benefit the gymnastics to prevent contraction of the lung. He did not think that they should be entirely given up, but that they should not be resorted to until the active stage of the disease has passed away.

DR. SHERMAN G. BONNEY, Denver, said that with reference to the matter of hemorrhage in relation to the altitude treatment, it had been his observation that only one case out of every four with a history of hemorrhage before arrival in Denver at an altitude of 5000 feet might be expected to have a recurrence. This observation was based upon a very large number of cases. He had read recently a paper on this subject, before the Climatological Association, which contained his statistics and he would not repeat them, but he might state that the

majority of cases which had bleeding at an altitude, were cases which had a hemorrhage shortly before leaving their homes, or just before arrival. He would also say that one case out of every four who had a hemorrhage shortly before arrival might expect to have one after arrival, and in a large proportion they will have it within a week or two after coming. The deduction from these observations should not be that such cases are not to have the benefit of removal to an altitude, or that they ascend by easy stages, but that they should wait for one or two weeks after having a hemorrhage, at the lower level, before undertaking the fatigue involved in going to an altitude. He did not think that they should stay away altogether unless there were other reasons than the hemorrhage, to deprive them of the benefits of climate. In many of the cases in which the hemorrhages were severe at an altitude, he had found that they were those in whom unfavorable manifestations might be expected in any locality, and which should never have started. While he was a believer in high altitude treatment of consumption, which is a broad subject, too extensive for discussion now, he realized that no one climate is the best adapted to suit every case. Some will do better at a little lower altitude. For several years in Colorado he had had experience with a number of cases which had been sent away from home without any discrimination whatever; cases of emphysema, of kidney disease, of extensive fibrosis; cases of chronic bronchitis of a dry type associated frequently with asthma, and aggravated forms of heart trouble. The cases just referred to frequently do better at a low level, in parts of California, for instance, than at a high one. He did not attempt to differentiate these patients according to all their clinical appearances, but always with reference to the individual, and the power which his heart possesses. While an extreme altitude is not adapted to all classes of cases, he thought that a great majority of consumptives do better at moderate altitude like 5000 feet than in any other locality.

He thinks creosote valuable, though not adapted to all cases. If given indiscriminately, it is capable of doing much harm. He deprecated the sentiment expressed by many patients who come to Colorado, that they will not take creosote. It is a popular fad at the present day that patients should say what they should take and what they should not take. He believed that creosote should be given in small doses, preferably in capsules. He is usually guided in its administration by the character of the expectoration and by its quantity. In the cases with very purulent expectoration, it is capable of doing very much good. In cases of dry bronchitis, with scanty expectoration, it is harmful. In some cases it may do good by its influence on the digestion, by diminishing fermentation and increasing the appetite. He had been much interested in the several communications by Dr. Bridge with reference to keeping the tuberculous lung at rest. He felt constrained to emphasize the fact, however, that it was far less important to keep the tuberculous lung at rest than to keep the tuberculous individual at rest. A great many patients who come to Colorado, with advanced trouble in the lung—in 71 per cent. the disease has been progressing for eighteen months before arrival—arrived at the stage of the disease of the lung where strapping is inapplicable. In some cases there is often a pleural effusion, and the patients do very well with it. He questioned if it was beneficial to aspirate in these cases; he had seen cases do poorly after aspiration and he had come to the conclusion that a moderate effusion should not be interfered with. Where the disease is active and confined to one lung, the speaker approved of the method of putting the lung at rest, but if there is trouble in both lungs it would do harm. With reference to the use of nitrogen injections into the pleural cavity, where the disease is strictly limited to one side, they may be useful, but the observations which have been made are to a large extent fallacious. It has been the experience of observers that while there is apparent improvement in the symptoms—the cough and the expectoration—upon examination of the lung six months later, it will show very little change in its physical condition. He was not certain that we do not lay ourselves open to the charge of doing harm by indiscriminate strapping, in a certain class of cases. Damage may result after the straps have been worn for five or six weeks, if we allow the patient to take them off suddenly. In one case, that of a lady who had gone through an attack of influenza with the straps on her chest, the latter were removed one evening with the intention of renewing them the next morning. During the night, she had a severe attack of coughing and developed a pneumothorax. He now observes the precautions of removing the straps gradually with an interval of a day or two between each, so as to gradually withdraw the support from the chest, instead of taking away the straps all at one time.

DR. C. L. MINOR, Asheville, N. C., criticized the remarks of Dr. Bridge on the ground that in rejecting pulmonary gymnastics Dr. Bridge did not differentiate between incipient and advanced cases. From his paper Dr. Bridge was evidently thinking of advanced cases, which all realize are not suited to gymnastics. If pulmonary gymnastics were to be of value they must be restricted to incipient or not very active cases; to use them in advanced ones might favor the more rapid dissemination of the trouble. Dr. Minor would take issue with Dr. Bridge on his general statement that the tubercular lung should not be exercised. This term, tubercular lung, covers too many conditions to be used without closer specifications, since it applies equally well to the lung with the least possible tubercular infiltration and to that which is totally disorganized. The opponents of gymnastics have always claimed that if we rest the tubercular joint it is equally necessary to rest the tubercular lung, but that a parallel can be drawn from joint to lung is not evident. It is rational to assume that deep breathing in an actively involved lung may do harm, and in such cases as show moist râles or more than a very few dry ones gymnastics are contra-indicated. It is, however, equally rational to assume that since the thorax in the recovering consumptive increases in size and contracted parts of the chest wall re-expanded we can not be far wrong in assisting Nature in her efforts in this direction in suitable cases. The speaker had now for a number of years used pulmonary gymnastics with undeniable benefit both in his own case and in those of many patients, had kept careful lead tape cyrtometer tracings of the chest shape before and after treatment, and could say that, with few exceptions, the thorax of a recovering tuberculous case always increased in size and that when that increase was assisted by gymnastics the patients did not suffer by it but did better and felt better, and that the falling temperature and improving signs showed that the harm Dr. Bridge feared was chimerical. Yearly he saw cases, but not many, where he had to discontinue these exercises for cause, but had yet to see any case which had suffered more than very temporarily from them. He believed that its chief effect was to combat and remove the peripheral atelectasis which in these cases offered such a good ground for the process to spread in.

Turning to Dr. Bridge's treatment by strapping and immobilizing, he did not believe it wise save during a dry pleurisy or after a hemorrhage. That the straps could effectually immobilize the lung he could not believe; certainly he could contradict the Doctor's statement that the arm muscles did not expand the chest; the pectorales, the shoulders being fixed, are well known to have such an effect and a short observation on one's self or a patient would convince one of it. The beneficent effect on an acute case of a rapid pleural effusion was often seen, but the cases helped were always acute, never chronic.

The statement that climate was a non-essential should be contradicted. It was not as essential as strict hygiene and good diet, but added to these it could cure cases that they alone would fail utterly to rescue. Our climatic resorts could show many people who had experienced this; no one who had lived in such a place could doubt that after hygiene and diet, climate took the next place.

DR. R. C. MOORE, Omaha, said that the advantages of various climates had been well described, but, in his mind, the chief desideratum was a climate where the patient can stay out of doors the most of his time. In any altitude, if the patient remains in his room, he will die. It is the fresh air that cures the patient whether he is in Colorado, California, or elsewhere.

An objection to sending a patient away from home is that by so doing he is often sent to a place where he has less freedom than in his own house, and is in fact in prison. He is also likely to meet with other unfortunates who are exiled from home and the effect is to depress him. Instead of sending his patients to such places, he tells them to go out on a ranch in his own State of Nebraska. He tells them not to be afraid of the fresh air, and not to sleep indoors. It is the constant breathing of vitiated air loaded with disease germs that causes pulmonary tuberculosis and the remedy is to breathe fresh air.

As regards the medical treatment, he had heard many remedies highly praised in this disease, but his experience was that any disease for which there were so many sovereign remedies, was incurable. The less stuff from the drug stores that you put into the stomachs of these patients, the better they are off. He is accustomed to give his patients some strychnia tablets (gr. 1/60), and gradually increase the dose to gr. 1/12, three times a day. This is about the extent of the drug treatment that is used in these cases, and he finds that his patients get on better and live longer than when he used to dose them with all the different drugs that were recommended.

DR. S. E. SOLLY, Colorado Springs—In regard to the statement by Dr. Burroughs that altitude is injurious because expansion of the chest is injurious to the lungs, he would say that while the diseased part of the lung should be kept quiet, the other part of the lung should be expanded and thus allow the diseased part to be at rest. This very thing is brought about by altitude; the healthy portions of the lung were so expanded by the rarefied air that they compressed the diseased portions, keeping them quiescent as in a splint. As regards exercise, he advised at first a period of absolute rest, then massage, Swedish movements, light gymnastics, waltzing, horse-back riding and golf playing. From repose to active exercise must be a path on an inclined plane. He had not had occasion to use injections of nitrogen gas into the chest. He had, however, often seen relief follow a pleural effusion, in which case he would avoid aspirating as long as the patient was doing well. He was opposed to the use of straps to keep the chest at rest. Strapping the chest interfered with the activity of the surrounding healthy lung, which required to be in its highest efficiency for the direct benefit to the tubercular area, as has been spoken of, and also for the indirect benefit to the aëration of the blood. As to what Dr. Burroughs had said about the innocuousness of the pus in the bronchial tubes, it is probably true, as long as it remains in them, but the danger is in its being carried to other parts of the lung. While in the bronchial tubes it perhaps is only harmful in interfering with the air entering the air cells. The speaker was glad to notice that Dr. Bridge was evoluting from the seashore, and beginning to remove his consumptive patients from the low damp air to the high and dry atmospheres of the mountains.

DR. NORMAN BRIDGE said that he had observed that not only Dr. Solly but other advocates of high altitudes are apt to apply the name of "stimulating," or "too stimulating" to the climate when explaining why certain cases get worse. For there are certain cases which do get worse, and it is then said that the climate was too stimulating for them. He wished that they would try to find out what this character of the climate really is, or else not use the word. With regard to the value of creosote, he had used it to a great extent and had come to the conclusion that some writers were about right in declaring that no condition of tuberculosis of the lungs is influenced in any way by any amount of creosote taken into the body. The advocates of this treatment have referred to cases which have recovered who had taken large doses of creosote. The speaker could point to a large number of cases that had recovered under precisely similar conditions without taking any creosote whatever; that in a very large number of cases, examined under similar conditions, recovery has followed the use of other agents. Hence, from these cases we can draw no conclusions of scientific value. As to the statement of his friend that he had seen good results from pulmonary gymnastics—

DR. MINOR—Not in active processes.

DR. BRIDGE—He draws the wrong conclusions as to the progress of the tubercular condition in the lung, which may have lesions in all stages.

DR. MINOR explained that he was guided by the temperature.

DR. BRIDGE—There are cases of dry fibroid phthisis which go on to destruction of the lung and death without any particular rise of temperature whatever. The thermometer is not an infallible guide. Dr. Bonney spoke about removing the straps gradually, but the speaker had never seen any bad effect from doing it, and thought the risk was exaggerated. In his remarks about the local treatment of the tubercular lung, he had no intention of minimizing the importance of putting the patient at rest. As regards the effects of the stimulating treatment, Dr. Solly had relieved the speaker's conscience and he had no need to discuss it. The gentleman from Nebraska had emphasized the most important point in the treatment, and without agreeing with everything he had said, the speaker thought that the remarks had embodied a great deal of good sense.

DR. C. S. N. HALLBERG, Chicago—Dr. Burroughs had laid much stress upon the necessity of purity of creosote, and upon the value of the tests which he relied upon. The speaker was compelled to say that creosote is not made by any such simple method as the reader of the paper had described, nor are the tests that he had given to be relied upon. The speaker thought that in prescribing creosote, physicians should pay more attention to the character of the preparation, or *form* of creosote they use. Creosote is one of the most insoluble remedies. It dissolves with difficulty in water, requiring not less than 150 parts. It is fortunate that it is so, otherwise we should hear of some bad results, as the large doses would seriously impair the digestion. Creosote is broken up by the alkaline liquids of the intestine, into guaiacol and creosol, thus forming more soluble antiseptic compounds. The speaker thought that the best method of administration of creosote is in the form of a pill (5 cg.) made with a soapy excipient, which passes unchanged through the stomach, and upon arriving in the intestine, slowly disintegrates. Dr. Hare, a few years ago, advised the administration of creosote water, a saturated solution (1 in 150), as being the best form in which to administer it. The method of administering creosote undiluted in capsules containing larger doses, 1 c.c. or more, is similar to that employed by railroad men for preserving the wooden ties from decomposition, in which the wood is creosotized.

The Doctor from Nebraska had spoken of the administration of strychnin in the form of tablets. The speaker called attention to the sparing solubility of the tablets in the alkaline intestinal tract. If a number accumulate in the intestine they may through changes in reaction dissolve at once and have serious results.

DR. A. C. KLEBS, Chicago, agreed with Dr. Solly's remarks upon the distinction to be made in the selection of cases for altitude treatment based upon the patient's social and financial condition. It often happens that patients are sent to an altitude as to an Eldorado; they are sent *en masse* to some celebrated health resort, and are in many instances just able to gather together a few dollars to take them there and with absolutely nothing to live on when they get there. Certainly, such warning as Dr. Solly had given was most valuable, and physicians should most carefully consider the social condition of the patients when advising the altitude treatment. Dr. Burroughs had made some unsupported statements; the statistics given were not satisfactory; they lacked in exactness and did not afford any explanation, and besides were based upon too few cases to be of any value. The administration of remedies by inhalation of sprays does not affect the tubercular lesions, and it has been abandoned by good authorities. Dr. Burroughs made the statement that the treatment of tuberculosis by creosote is a rational treatment; but the facts he produced do no seem to substantiate such a statement. Dr. Bridge's paper on the treatment of a tubercular lung was of the utmost interest, and the speaker was very glad to hear him emphasize two points: the prevention of useless cough, and the importance of rest to the lung itself. The former has

not had sufficient attention given to it. Patients should be instructed that a certain amount of cough and expectoration are necessary, particularly in the morning after a night's rest; but they can be taught to control excessive coughing by attention to certain points; they can learn to control the cough by will. They have to cough in the morning; but if they can refrain from responding to the slightest irritation and wait until after breakfast, the expectoration can be accomplished with much less exertion. Everyone should read the classical essay by Dr. Detweiler on the restraining of unnecessary cough. The gentleman from Nebraska has struck the key-note, which had been already mentioned in the speaker's paper, that true science is only systematized common sense. If he would systematize his common sense he would be very near the truth. His reference to the fresh air wherever found and its influence in effecting cure was very good. Without detracting from the effects of climate and altitude, it is the open air as such that is one of the chief factors. The climates that permit the greatest opportunities for living in the open air are the best climates for the treatment of pulmonary tuberculosis, but this in no way alone constitutes everything; every feature in the patient's life demands attention and careful regulation under the supervision of a competent physician.

TREATMENT OF ACROMEGALY WITH PITUITARY BODIES.*

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Changes of some kind have been found in the pituitary body in all cases of acromegaly, in which there could be no doubt about the diagnosis, and in which a careful macroscopic and microscopic examination of the hypophysis was made. This is conceded by almost all writers who have contributed to our knowledge of the subject. Some, however, claim that the enlargement of the hypophysis is but one of the effects of the malady, something similar to the enlargement of the spleen, for instance, which has been found so often in acromegaly. They forget that in many cases we find not a simple hypertrophy or hyperplasia of the gland, but a malignant growth which does not in any way resemble the simply hypertrophic tissues found in other parts of the body. They also forget the fact—impossible of explanation if their view were correct—that in very nearly all acute cases of acromegaly a sarcoma has been found. I have said that in all cases of acromegaly the hypophysis was diseased. Both Hinsdale and Sternberg, who have collected the reports of 57 and 47 autopsies respectively, claim such changes for all of these cases. The literature, however, contains a few instances of apparent exception to this rule, such as the ones reported by Arnold and Sarbo. In the first of these I witnessed the autopsy myself, and I know that at that time Arnold did not make a positive diagnosis, and I do not believe that he has done so since then. Sarbo's case is also one of very uncertain diagnosis. Then, there is one instance quoted in literature in which the hypophysis is not even mentioned; that a thorough examination of the gland was made seems extremely doubtful. Labadie-Lagrave and Deguy report another case of acromegaly, without changes in the pituitary body, but they made no microscopic examination of any part of the body. It seems, then, that Sternberg and Hinsdale, Grasset and Rauzier and others were justified in pronouncing lesions of the hypophysis a constant finding in acromegaly. There is, as far as I am aware, but one case of this disease known to have occurred in an animal, the one reported by Cunningham, and he found the hypophysis of his dog enlarged.

Several theories have been propounded which are to explain just how the disease of the gland causes this peculiar form of giantism, but the material at hand forms an insufficient basis for a positive answer to this question. Joffroy thinks that when the pituitary body is diseased and over-active, acromegaly results, excepting when the patient is very young, when giantism is supposed to be the consequence; that if the gland be destroyed, atrophy and cachexia result, a condition similar to cachexia strumipriva. Hansemann, too, believes that an increased activity of the gland is the pathogenetic factor. Since we know of one case of acromegaly in which the pituitary body was entirely wanting, this explanation can not be correct. I should not, however, feel justified in considering a single case a sufficient basis for a theory; otherwise the only possible conclusion would be, that a decreased secretion is the causative factor.

A number of facts seems to indicate that the hypophysis in some way exerts an influence upon the growth of the body. These I wish to refer to briefly. In a paper on cerebral localization, read by me at a joint meeting of the Chicago Medical and Chicago Neurological societies last year, I spoke of one of my cases in which a psammoma of the pituitary body was found postmortem, and which intra-vitam had shown not the symptoms of acromegaly or giantism, but those of stunted growth. The patient, at the time of his death, his 18th year, was about as tall as the average boy of 14, and his parents stated that his physical development had ceased at that age. His genitals were still infantile. The only cause for the dwarfism that could be found was the tumor of the hypophysis. The thyroid gland was not examined at the autopsy, but seemed of normal size during life. A search in literature for similar cases yielded the following results: Levy, in his thesis, reports the case of a woman, 33 years of age, who died of lymphosarcoma of the hypophysis. The record of the postmortem findings contains the words: "Infantiler Zustand der Genitalien." Another similar case is that of Pechkranz, a tumor of the hypophysis in a boy of 15. The patient is of average size, but his sexual organs are undeveloped, "like those of a boy of 5." The case of Uhthoff is somewhat more complicated. He examined a girl, 14 years old, who had developed normally up to the age of 9. At that time she is supposed to have had pneumonia, and since then physical development had ceased entirely, while intellectually the patient appeared normal. The case is complicated by the fact that the thyroid seemed abnormally small, but there were no signs of myxedema; the skin was thin, rather atrophic. Uhthoff found temporal hemianopsia with atrophy of the optic nerves, and hemianoptic reaction of the pupils. He is of the opinion that the hypophysis must have been diseased. His theory is that at the age of 9 degeneration and atrophy of the thyroid began, which caused stunted growth and secondarily enlargement, and degeneration of the hypophysis. Benda, in his paper on the normal and pathological histology of the hypophysis, mentions that both he and Hutchinson found changes in the hypophysis of dwarfs. And this leads me to another group of facts which seem to support the view that the pituitary body in some way influences the development of the body, that is, the re-a-

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tionship which evidently exists between the function of this gland and the thyroid. That the latter has some such function seems established beyond all reasonable doubt by our experience in cases of cretinism. It is well known that extirpation of the thyroid gland in animals is followed by hypertrophy of the hypophysis, more particularly of its anterior portion; both glands are known to contain iodin; both have a similar histological structure; both secrete colloidal material; in myxedema the pituitary body is almost always diseased; the same is true of the thyroid gland in acromegaly. Revilliod furthermore has noted changes in the extremities in exophthalmic goiter, which, in his opinion, represented the exact reverse of what is generally seen in acromegaly. Finally, it may be well to call attention to the fact that exophthalmic goiter and myxedema—both of them rare diseases—have been found associated with acromegaly in so large a number of cases that the appearance of these diseases in the same individual seems rather beyond the probability of a mere coincidence.

Those who do not believe that lesions of the pituitary body are the cause of acromegaly make much of it that occasionally the hypophysis has been found diseased in those who were not acromegalic. Would they have us believe that because they are goiters without myxedema or Graves' disease, the thyroid has no influence upon the development of these maladies?

The considerations just given seem to offer a sufficient justification for experiments with the feeding of powdered pituitary bodies in cases of acromegaly. The results of a series of such experiments in three cases were the following:

CASE 1.—D. P., 29 years old, tailor, Jewish. His parents are alive and healthy; of his nine brothers and sisters, only two are living, but the rest seem to have died from diphtheria. There is no history of any nervous disease or trouble similar to that of the patient in the family. His three children are also healthy. He himself has had typhoid fever some fifteen to eighteen years ago, and a fall ten to eleven years ago; since then he complains of pain in left side. He has used alcohol in moderation, never smoked. It was not possible to ascertain definitely how long he has been ill; he thinks that it is about five or six years since he first noticed an enlargement of peripheral parts. For four or five years he has been depressed mentally at times. His head has troubled him a good deal for three to four years. The pains are described as sticking, are not confined to any one part of the skull; with them he has had considerable dizziness, said to be particularly intense when he looks to the left. At times there has been pain similar in character to the headache in the left eye; occasionally, some tinnitus. During the last two years he has gradually become weaker. His voice has been changed for four to five years. Frequent micturition, but as far as patient knows no change in appearance of urine. Constipation. Of late, gradual decrease of sexual power.

Patient measures 5 feet, 9 inches in height; is well built; somewhat anemic. General state of nutrition seems fair. Memory and intellect corresponding to his social condition. Slight mental depression. His skull is very large, square, measures 25 inches in circumference. The temporal ridges of the frontal bone and the zygomatic bones are very prominent. The skin of the face seems thickened; the pores are distinctly enlarged. Lips also very thick. Hair appears rather coarse. Eyes: motility normal; no exophthalmos; pupils normal in every way. At the time of the first examination the fundus and vision were normal; since then, however, the patient has developed both optic atrophy and a bilateral diabetic cataract (Dr. Hale), and his vision has become very poor.

The nose is abnormally broad and generally thickened; sense of smell impaired on both sides. Ears are somewhat deformed (congenital), large; hearing good.

The lower jaw is very large, square; the palate presents an unusually high arch, and a very pronounced torus palatinus. The tongue measures 2¾ inches in width, is rather thin, shows a coarse muscular tremor. The reflex from the soft palate is present, also that from the lower maxilla. Speech thick, evidently on account of the large tongue. The voice is deep and hoarse. Teeth not altered. Patient claims that there is an increased secretion of saliva (difficulty in swallowing on account of large tongue?). Thyroid gland not to be found. Some dulness to percussion over upper part of sternum. Abdominal organs normal. Genitals of average size, excepting testes, which are rather small. Spinal column straight. No enlarged glands. Neck is broad and thick; in lower occipital region a heavy fold of thickened skin. The patient's entire thorax is very large, the sternum broad and thick; the clavicles and ribs seem affected in the same way. It is hardly necessary to describe in detail the changes in the upper and lower extremities; they are those characteristic of acromegaly. The muscles of the forearm seem rather hypertrophic. The patient's gait is that of a man who is very tired. A few measurements will serve to give an idea of the size of the parts affected. The greatest width of the hand is 8¾ inches; the circumference of the index finger 3½ inches; that of the middle finger about 3¾; that of the thumb 3⅝. Length of hand from wrist to tip of middle finger 7⅞ inches. The thorax measures 46½ inches in circumference in its upper end, and 43⅜ in its lower parts. The foot is 4¾ inches broad, 11⅝ inches long. The clavicles measure 7¾ inches in length.

Sensibility appears to be normal all over the body. The cutaneous reflexes were of the usual intensity; the deep reflexes diminished or absent. The patient's feet were cold and damp. General hyperidrosis. No trophic disturbances in nails.

The course of the disease in this case seemed to be slowly progressive. I have already mentioned the fact that atrophy of the optic nerve was found later on, and a cataract due to the appearance of sugar in rather large quantities in the urine. The patient seemed to lose in strength, and became more and more emaciated. For a short time thyroid feeding seemed to give some relief. The appetite became better; the bowels more regular; headache and dizziness decreased, and the patient felt some stronger. But it soon lost its effect. For the last ten weeks the patient has been taking powdered pituitary bodies, as he stated, without any change for the better. When, however, this medication was stopped for a week, he came and begged that he be given the same powders, for since he had stopped them his headache had became much more intense. It seems to me as though, during the last few weeks, the mental depression had been much less marked.

Since this was written we have repeatedly withdrawn the pituitary bodies for a short time, without any decided change in the patient's condition, excepting, perhaps, an increase in the mental depression.

CASE 2.—Patient, C. P., 30 years of age, Swedish, unmarried, cook. Examined April 24, 1899.

Family history: The patient's father died of old age; her mother succumbed to an attack of pneumonia; four sisters and one brother are well. No similar case has ever occurred in the family.

The patient's past history reveals nothing that could in any way be considered an etiologic factor; no indications of syphilis; no alcoholism; no mental or somatic trauma; no infectious diseases; no nervous symptoms of any kind.

The present trouble seems to have begun very gradually within the last year or two, but it is not more than one year since the symptoms became more marked. Within that time the patient has noticed a gradual enlargement of hands and feet, which compelled her to change the size of shoes and gloves, so that now she wears both of them two sizes larger than a year ago. She found greater difficulty in doing finer work, her hands had become "clumsy." Her voice has become

more and more hoarse, so that the girl could no longer sing, formerly a favorite pastime with her. Then she also began to have trouble with her finger-nails; they became brittle and would break frequently while she was at work; the skin surrounding them would become thickened and inflamed, and the nails would drop off, but would very soon be replaced by new ones. She has suffered from headache almost continually since ill; at times this pain becomes terrific, and is then associated with vomiting. There has been an increasing weakness since last winter, and off and on an itching sensation all over the body. The appetite has always been fair, the bowels constipated. In spite of being ill, the patient claims to have gained some in weight. Just how much she does not know. Menstruation has always been normal. When I saw the patient for the first time, she was suffering from one of her attacks of very violent headache, and with it she had typical, projectile vomiting. Only after repeated large doses of morphin did she obtain some relief from the pain. She felt unable to continue her work on account of general weakness, and was sent to the Michael Reese Hospital for treatment.

Examination on April 26, 1899: The patient is not unusually tall, has a good panniculus adiposus. Slight degree of anemia. On the skull the changes are but slight. The frontal region appears somewhat more prominent than is normal; the lower jaw is large and projects some. Tongue and lips are not thickened, nor are the ears enlarged. The thorax is large, though perhaps not pathological. Thyroid gland of average size. No enlarged lymphatic glands. The changes on the hands and feet are quite characteristic. There is a general enlargement of these parts, no deformity of the same. Both tibiæ are also of uncommon size and thickness. The hair appears to be normal. No hyperidrosis. The finger-nails are all more or less diseased. They are thickened, abnormally brittle, marked by distinct transverse furrows; in some instances the ragged ends are discolored, black. Where the old nail is about to be shed, a new one may be seen under the remnants of the old one.

The heart and lungs show no evidence of disease. There is no polyuria, but examination of the urine shows the presence of a trace of albumin, and a few hyaline and granular casts. No sugar.

There was some horizontal nystagmus, and Dr. A. B. Hale, who kindly examined the eyes for me, found beginning atrophy of the optic nerves, with normal retina. The pupils reacted both to light and to accommodation, and there was no paralysis of extrinsic ocular muscles. I am indebted to Dr. Pierce for an examination of the larynx, which showed the following changes: "Interarytenoid folds thickened; on true vocal cords nodular swelling; false cords also thickened; motility normal; slight swelling below the commissure."

Both knee-jerks were very brisk; ankle clonus could be obtained on both sides. Mentally, the patient appeared perfectly normal. There was no loss of memory, no somnolence, no mental depression.

The patient remained in the hospital from April 26 to June 3, 1899. During that time the temperature was always normal, excepting one rise to 99. The pulse rate ranged from 60 to 100; twice it was 60 and twice 64.

We first gave 15 drops of saturated solution of potassium iodid, t.i.d., and codein, gr. 1/3, for pain, when needed. On May 7, we began to administer powdered pituitary bodies. The dose was 5 grains, three times daily. Up to May 8 it had been necessary to give codein five times. After that date the patient had no further attack of headache that called for an anodyne.

She improved steadily, as far as the subjective signs were concerned, and during the one and one-half years that she was under observation had but one attack of headache, and that after she had been without the pituitary bodies for several days. She was then ordered to continue the gland, and has been free from headache since then. She had regained her strength sufficiently to take up her work again shortly after she left the hospital, and until August of last year felt well, with exception of the attack just mentioned. At that time, however, she began to suffer from violent cramps in the calves of the legs, which came on very frequently during the night, causing insomnia. At the same time her mental condition changed, she became depressed and very emotional, was convinced that she would become a cripple, etc. In September she returned to her old home. As far as the objective signs of the disease are concerned, I could not discover any change either for better or for worse during the last one and a half years.

CASE 3.—M. H., 58 years of age, retired merchant, Jewish. Patient was first examined Jan. 16, 1900.

His mother was a nervous woman, died at age of 65 "from asthma." The father is now 80 years old, suffers from stomach trouble. Of the brothers, one is said to have died of tuberculosis, one of heart trouble, four are living, all of them asthmatic. I had occasion to examine a photograph of all the members of the family; none of them showed any signs either of acromegaly or of giantism. Of the patient's children, one died of inflammatory rheumatism. The rest are living and, excepting for nervousness, well.

Patient has suffered from rheumatism off and on. He has always worked very hard, and has been exposed to the inclemencies of the weather a good deal. He has had a good deal of trouble and worry during the last few years. He has never used alcohol to excess, but has smoked a great deal. He has not been nervous. For years he has had frequent attacks of asthma. During the last six to seven years he has had more or less headache. His present illness, he thinks, dates back about three or four years, and began with attacks of vertigo, during which objects seemed to revolve around the patient. For two to three years his bowels have been constipated, and he has had a good deal of headache, always in left frontal region, dull. His hands feel stiff and weak. Frequent pain in lumbar region. He has not noticed the enlargement of the extremities, but during the last few months others have frequently called his attention to these changes; his head, he claims, was always very large. At times during the last two years he has had trouble in closing the left eye. His vision is good. For the last year he has noticed attacks of palpitation. The urine was examined one year ago, and found normal. He is troubled considerably by polydipsia. Sleeps good. At times some tinnitus aurium. Of late he has not been able to eat solids any more, because the lower set of teeth projected so far beyond the upper ones that he was unable to masticate. During the last two years he has perspired very freely. He was examined on a rather cool day, but his underclothing was fairly soaked with perspiration. The patient is about 5 feet, 8 inches tall, weighs 193 pounds; is well nourished. The skin of the face seems thickened, the pores enlarged. His skull measures 24¼ inches in circumference. To describe it would mean merely to repeat what I have said about the cranium of Case 1. His ears are large, somewhat thick; his nose broad, large and thick. The color of his eyes is brown, with numerous black spots on iris; the motility is normal, excepting for an occasional trace of horizontal nystagmus. Pupils react normally. No changes in fundus. Senses of taste, smell and hearing not affected. The hard palate is very high, arched, the tongue broad and thick. His voice is deep, hoarse. The respiration is rapid and laboured. Thyroid gland of about normal size. Heart: Mitral insufficiency; arteriosclerosis; pulse, 76. Emphysema of lungs. Spleen not enlarged. Marked gibbus and curvature of the spinal column to the right. Glands not enlarged. Both the cutaneous and deep reflexes are normal. His hands, as well as his feet, show the changes characteristic for acromegaly. The long bones in the extremities seem somewhat thickened, too. The clavicles and ribs are distinctly enlarged, particularly broader than normal.

Examination of urine: Specific gravity, 1025; urea, 2.5 per cent.; no albumin; some hyaline and granular casts.

The patient was put on 5 grains of the powdered pituitary bodies, t.i.d. On Feb. 2, 1900, he reported that he had had very little headache since he took the powders; felt "less weak-

ness in the bones," had but little vertigo and is troubled less by hyperidrosis.

April 27, 1900: Patient has been in California for last two months. Very much less headache, no vertigo at all. Feels stronger. No pain in back; no more hyperidrosis. Appetite good.

In this condition the patient remained up to December, 1900. He "felt better than he had been for years." At the time just mentioned he had an attack of asthma, which was followed by edema of the ankles, and the appearance of albumin in the urine; his pulse became very rapid, irregular and weak. Under digitalis and strophanthus he first improved, but became worse again very suddenly on the morning of December 31, and died on the same day. It does not seem probable to me that his acromegaly had anything to do with his death; the exitus seemed due to the cardiac and renal disease.

The result of the treatment with pituitary bodies, then, in these three cases, was that the first patient derived little, if any, benefit from it, while in the other two cases, for one and a half and one year respectively, the condition of the patients seemed decidedly improved. Headache, dizziness, general weakness, hyperidrosis and vomiting disappeared, while the trophic changes in the nails of our second patient became very much less marked. With her new symptoms appeared, almost as troublesome perhaps as those from which she had been relieved. Still, if we will stop to consider how little other methods of treatment can do in this disease, even the slight improvement obtained seems gratifying. The most important question for us is: Did the feeding with pituitary bodies exert any beneficial influence whatever? This question, for the last two cases, at least, is to be answered in the affirmative. We have not forgotten the possible effect of suggestion, and have tried, as far as possible, to exclude its influence. The fact, too, that in two cases tablets of pituitary bodies seemed to yield less satisfactory results than the powder, although it had been impressed upon them that both contained exactly the same ingredient, seems to me to point rather to a difference in solubility than to a mere imaginary effect. It is hardly reasonable to expect the treatment to cause those symptoms to disappear which are due to organic changes in the tissues, such as the optic atrophy or the enlargement of peripheral parts, but the subjective symptoms were relieved both in two of my own cases and in quite a number of those recorded in literature.

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THE TEACHING OF PRACTICAL DIETETICS IN MEDICAL SCHOOLS.*

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In state legislatures within the past two years the medical profession has had to defend itself against the ancient presumption that its practice is essentially based upon the administration of drugs, while other so-called systems of healing have claimed exemption from the operation of medical practice laws upon the plea that their followers do not employ medicinal agents. The contention is an odd one in days when therapeutic nihilism has widely invaded the ranks of the profession of medicine, but it has, together with that nihilistic tendency, a common cause.

Drug dosage is not the dominant rule of practice that it once was, howsoever the reputation of that rule clings persistently to the skirts of the profession. But, while medicinal measures have been finding their proper place in the treatment of disease, other and non-medicinal measures have been rising into recognition and awaiting their assignment to a fit place in the armamentarium of the physician. That these measures have not always been the subjects of medical discovery has unfortunately hindered their ready adoption. The profession has not been invariably hospitable to new truth, while it has clung to ancient and uncouth dogma, at times, with the tenacity of the theologian. It has often had to be shaken out of its indifference to actual progress by popular agitation over some modern fad, which had a reason of partial truth underlying its unreasonable being. The "blue-glass craze" had its meaning in our neglect of the influence of light and color upon animal as well as vegetable nutrition. That "christian science" has been a medical as well as a religious cult, is incident to the failure of our own following to appreciate sufficiently the psychologic element both in the causation and cure of disease. The rise of osteopathy signifies our undervaluation of manipulative measures of treatment. The success of the sanatoria reflects upon our ignorance of practical dietetics.

Medical educators, who have been particularly conscious of the stress which scientific progress has put upon the study of modern medicine, have been especially slow in the adoption of new measures of treatment into the curriculum of the schools. Admirable as this conservatism is, in a day when truth is rapidly leavening a great mass of heterogeneous material and when it is often difficult to distinguish by-products from ultimate results, yet this is a habit which has sometimes left the schools in the rear rather than in the van of movement. The too-long-delayed teaching of the therapeutics of suggestion and of mechano-therapy in medical courses, are illustrations of this disposition of the teacher to follow rather than to lead.

In no subject, however, has medical need been more insufficiently met by educational supply than in that of practical dietetics. With the clearer definition of a large class of nutritive disorders, dependent upon the non-correlation of digestive, metabolic and eliminative functions, and with the growing recognition of the liability of the alimentary canal to bacterial and parasitic invasion, the study of foods and methods of feeding, in relation alike to the maintenance of health and the treatment of disease, has become one of very great importance. Yet the writer ventures the very strong assertion that there is no subject related to the practice of medicine of which the average physician knows less. This prevailing ignorance is not a matter of neglect upon his part, but of necessity. The medical institutions of learning of the past have taught him nothing. To-day they offer little—in most instances nothing—in the way of practical instruction. Two colleges—the department of medicine of Harvard University and that of the University of Minnesota—provide laboratory courses in this subject. In the latter, and presumably in the former school, these courses are elective. Their election by a great majority of the senior students and the enthusiasm with which the courses are pursued, attest their answer to a recognized need.

Text-books upon dietetics are lamentably few and, still more unfortunately, inferior. They do little more than to meet the serious want of the would-be student with series of dogmatic statements, which justify much of the skepticism of their actual authority felt by practical men. It is not strange that in practice dietetics has been pursued, if pursued at all, in a purely empirical manner.

How can the deficiency be met? What place and what scope should a course of study in practical dietetics in the curricula of the medical schools take? How can it be made most available to undergraduate and post-graduate student alike?

The experience of the department of physiology of the University of Minnesota, in its effort to fulfill this need, may be cited as a practical attempt to find answers to these queries: 1. The course in practical dietetics has been placed in the senior year. It stands thus, where it belongs, among the clinical branches, with which it is in practical association. So placed, it can most readily offer its opportunities to the post-graduate student. 2. It is an elective and one of an increasing number of electives which are provided in the senior year. The congestion of compulsory work, which has not been relieved by the addition of a fourth year of medical study, has developed a growing tendency to a division of the courses into required and optional branches. This tendency is in accord with the similar movement along all educational lines. Not the least merit of cultivating the principle of choice of study is the added interest of the student in a chosen work. The classes which have elected the course in practical dietetics have shown a very gratifying interest in its pursuit. Men have demonstrated a success equal to that of women in the diet laboratory. 3. The course in dietetics is essentially practical. It is conducted under the chair of physiology and it conforms in method of study to the subject of which it forms a part.

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Its first concern is to acquaint the student with the content of common foods. In his physiologic studies he has become familiar with foods in metabolic classes, as proteids, carbohydrates, fats and salts. Of the proportions, relations and character of these foodstuffs in meats, breads, vegetables, etc., the student and the practitioner of medicine usually know nothing. It is the business, therefore, of this course to teach him the composition of the common articles of dietary, the dominant or most valuable food qualities of each and the means by which these qualities may be best conserved or elaborated.

With this content learned, he is taught to compare and select the several forms of food, with some reference to their economic value, in order that he may suit his selection to the circumstances of those with whom he has to deal. He learns, too, to estimate foods by their several standards of valuation, with reference to their digestive, nutritive, metabolic and esthetic qualities, inquiring how these qualities compare, conflict or may be made to harmonize with each other. He is taught that harmony between these several values is essential to the highest selection of foods.

At the same time, he undertakes the study of the principles and practice of food preparation. He does not learn merely the art of cooking, or even of hygienic cooking, in the ordinary sense of the word. The laboratory of dietetics is not simply a cooking school. He learns not to build menus, but to assist in building tissues. He is constantly reminded of the uses to which food materials are to be put, of the processes to which they are to be subjected within, as well as without, the body. Food preparation, or the actual cooking of foods, is in fact minimized, in sympathy with the best physiologic teaching. No method of cooking is taught which does not or should not improve the digestive, conserve the nutritive and enhance the metabolic qualities of the food.

In relation to food preparation, he studies the office and limitations of heat as a means of cooking, the best methods of obtaining and utilizing heat for cooking purposes, the most desirable forms of cooking apparatus and utensils, and the several processes by which food may be profitably prepared. Incidentally, he learns the adaptations of different foods to conditions of disease, the modifications of food which the sickroom may demand and the forms of food suited to successive periods of life.

COURSE OF STUDY.

Two lessons are devoted to milk. They require a study of the content and percentage composition of human and different animal milks; they discuss methods for the modification of milk for infant uses; they teach the process of its predigestion, and the use of measures for the improvement of its digestibility and for the variation, in many ways, of its flavor. Similarly, eggs, cereals, bread, modifications of bread, meats, fish, soups, vegetables, fruits, plain puddings, cold desserts, beverages and infant foods, are severally studied.

Brief talks are given in connection with the practical lessons, in which the various methods of cooking, the different means of employing them, the selection of foods in market, the serving of foods especially for the sick, the choice of food in diseased conditions, etc., are discussed. The students work in pairs, and each pair is provided with a complete outfit of the most improved cooking utensils and has access to gas stoves and Aladdin ovens for the preparation of foods. Each tests and submits the product of the work to the approval of the staff.

A lady instructor in dietetics, who has been practically trained in the best schools of domestic economy, as well as in the University itself, and also the demonstrator of physiologic chemistry, assist the chair of physiology in the conduct of this course. At the close of the sixteen weeks of study the members of the class are competent to select, prepare and serve, physiologically and, at the same time, artistically any desirable form of food. They can intelligently criticise or direct the cooking of a meal or of any special diet.

It is with the hope that this practical addition to the medical curriculum will commend itself to the intelligence of the profession and, particularly, to the educator in medicine, that this brief notice is called to this initial and still novel attempt in the teaching of practical dietetics.

THREE CASES OF PARALYSIS OF THE SERRATUS MAGNUS AND THE TRAPEZIUS—ALAR SCAPULA.*

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PHILADELPHIA.

The scapula affords attachment for many large and powerful muscles that play an important part in the varied movements, not alone of the shoulder but also of the entire upper extremity. Thus, the trapezius aids in elevating the scapula and approximating it to the spine; also in rotating the scapula, causing the acromion to ascend and the lower angle to move outward. The action of the trapezius is supplemented by that of the elevator muscle of the angle of the scapula and of the rhomboids, the latter of which rotate the scapula on its outer angle and cause the lower angle to move inward. The serratus magnus moves the scapula outward, forward and slightly upward. It tends to rotate the scapula on its inner angle and thus to elevate the acromion, but in this it is opposed by the elevator muscle of the angle of the scapula and the rhomboids. It also helps to keep the scapula applied to the chest. The deltoid abducts the humerus to the horizontal and also moves the arm both forward and backward. The supraspinatus aids the deltoid in abducting the arm, moving it forward and rotating it inward. The infraspinatus and teres minor rotate the humerus outward, while the subscapular rotates the humerus inward. The latissimus dorsi lowers the arm when it is raised, displaces it backward, adducts the scapula, depresses the shoulder, inclines the trunk and, acting with its fellow, extends the trunk. The pectoralis major brings the shoulder forward and upward or downward in accordance with the position of the arm. The teres major approximates the humerus and the outer border of the scapula, adducting the former and rotating the latter.

The actions of the several muscles named are, as will be seen, not simple, but complex and associated, so that any deficiency that might result from impairment or loss of the function of any one or more might be in large measure made good by the compensatory action of others. In addition, the muscles under consideration are innervated principally from the brachial plexus or the nerves constituting or originating from it, although

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some of the muscles receive fibers from the cervical plexus, and the trapezius is supplied by the spinal accessory; so that, while it is not impossible for disorders affecting individual muscles to occur, it is more likely that several will suffer as the result of a single lesion.

Isolated paralysis of the serratus magnus is rare. It is often complicated by paralysis of the deltoid, the supraspinatus, the infraspinatus and especially one or another portion of the trapezius. It is said to suffer often on account of the superficial and long course of its supplying nerve—the long thoracic on the side of the neck and chest. The most common cause is injury to the nerve in its peripheral course, as by a blow, a fall; or pressure, as by a heavy weight upon, or a crush, a punc-

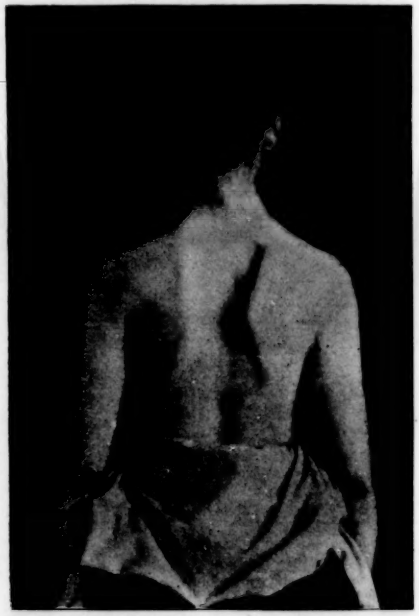

Fig. 1.—Displacement of the right scapula when the patient first came under observation.

tured or a gunshot wound of, the shoulder, involving especially the supraspinous region; or compression by contraction of the scalenus medius muscle, through which the nerve passes. The nerve, further, may be injured in various ways in the axillary cavity. Cold and wet and the influences thought to be contributory to rheumatism may cause serratus-palsy, and inflammation of the long thoracic nerve may develop in the course of infectious diseases, typhoid fever, influenza, diphtheria, rheumatism, erysipelas and the puerperal state. The serratus magnus may suffer, together with other shoulder-muscles, in the presence of progressive muscular atrophy, progressive muscular dystrophy, acute anterior poliomyelitis, less commonly in the presence of cerebral paralysis and least of all in consequence of direct injury to the muscle itself. Instances of hysterical paralysis of the serratus have also been recorded.

Paralysis of the serratus magnus is, by reason of the etiologic factors, more common in men than in women, and, apart from infection and refrigeratory causes, as well as progressive muscular atrophy and dystrophy, occurs principally in adults and is more common on the right side than the left. Occasionally the muscles on both sides are affected in succession. The onset of the paralysis, particularly if of peripheral origin, is often preceded by pain in the supraclavicular fossa, radiating to the ear, the occiput, the scapular region and the arm, and this may persist for a variable period of time.

There has been some difference of opinion as to the position of the scapula when the arm is at rest in the presence of paralysis of the serratus. By some it is thought that the shoulder undergoes no change in position under these circumstances; others, however, have contended that the scapula becomes elevated and its inner border approximated to the vertebral column and

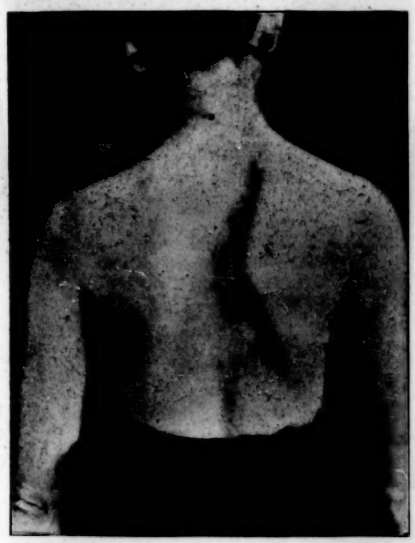

Fig. 2.—Displacement of the right scapula after the patient had been under treatment for two months.

directed obliquely upward and outward from below, while the inferior angle exhibits a wing-like projection backward and the outer border assumes a more nearly horizontal position. More recently it has been maintained that the median border retains its direction parallel with the vertebral column.

Generally the patients are unable to elevate the arm above the horizontal, and when this is attempted the median border of the scapula approaches the vertebral column. If the arm is held horizontally in front the median border and the inferior angle of the scapula are removed from the thorax and the scapula stands off like a wing, an excavation resulting, in which the hand can be introduced. The arm can sometimes be raised above the horizontal by means of a sudden jerk, especially if

the upper part of the body be inclined backward. This movement can be effected also if the inferior angle of the scapula be rotated downward and outward and be pressed against the chest by another person. The patient also has difficulty in performing pushing movements and in crossing the arms in front. Sensory changes are generally wanting, and the electric alterations vary with the nature and the intensity of the underlying cause.

Paralysis of the trapezius may result from exposure to cold and wet, gunshot and punctured wounds, blows, operations, disease of the vertebral column and the posterior portion of the base of the skull, of the spinal cord and medulla, or inflammation of the accessory nerve, from any other cause. It may be a manifestation of syringomyelia or of tabes, or of progressive muscular dystrophy or spinal progressive muscular atrophy. The symptoms vary in accordance with the portion of the muscle affected and the degree of involvement. The trapezius is constituted of three parts: an upper or

Fig. 3.—Displacement of the right scapula when the upper extremity was extended horizontally at the side.

clavicular, a middle and an inferior. The first or respiratory portion passes from the occiput to the outer third of the clavicle and draws the head downward and rotates it to the opposite side when the shoulder is fixed. The middle portion passes from the ligamentum nuchæ and the upper three dorsal vertebræ to the acromion and outer half of the spine of the scapula and is the proper elevator of the scapula. The inferior portion passes from the fourth dorsal vertebra and goes below to the inner half of the spine of the scapula and brings the median border of the scapula toward the vertebral column.

If the entire muscle is paralyzed the shoulder droops, the scapula being displaced downward and forward and separated from the spine and its inner border is oblique from below and within upward and outward. In raising the arm the scapula remains applied to the chest and moves outward as a whole. If the shoulder is elevated it does not rise so high as its fellow. The elevator muscle of the shoulder becomes prominent. The arm can be raised above the horizontal, especially if the clavicular portion is but little if at all affected, though not so well as its fellow, nor can the shoulder be drawn backward as well as normally.

The upper portion of the trapezius often escapes and when involved is so after the others. The middle and lower portions are usually involved together, though the latter may suffer before the former. When the upper third is involved moderate elevation of the shoulder is still possible. The affected shoulder is raised in deep inspiration. Paralysis of the middle third gives rise to a rocking movement of the scapula. The acromial extremity is lower than usual, while the inferior angle is higher

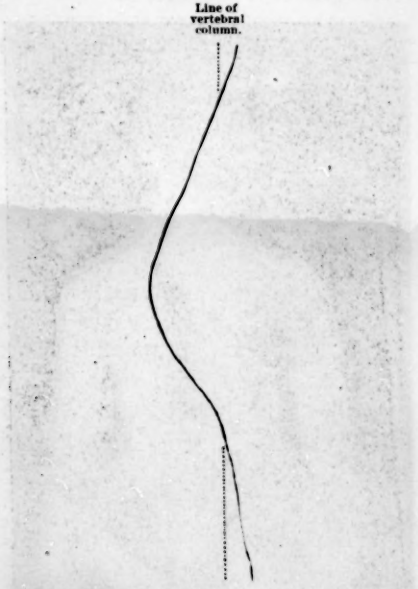

Fig. 4.—Diagrammatic representation of displacement of the right scapula when the upper extremity was extended horizontally at the side.

than usual and it approaches the middle line, the inner border of the scapula passing obliquely from above and without downward and inward as if the bone were suspended at its upper inner angle by the elevator muscle of the scapula. When the inferior third of the trapezius is paralyzed the symptoms are much the same as those attending paralysis of the middle third, but in intensified degree. The scapula recedes from the spine, the acromion is depressed, the clavicle is prominent and the supraclavicular fossa is marked.

In the presence of disease of the posterior external branch of the spinal accessory nerve the sterno-mastoid also would be involved, while disease of the anterior internal branch would be attended with disturbance in the functions of the soft palate, the pharynx, the larynx and in the rhythm of the heart.

I wish to report three cases seen at the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases

in which the serratus and the trapezius were paralyzed, two in the service of Dr. S. Weir Mitchell, and one in that of Dr. Wharton Sinkler, to both of whom I am indebted for the privilege of making this use of them.

CASE 1.—M. J., a widow, 53 years old, was admitted to the hospital Jan. 29, 1901, when the following history was elicited: In May, 1900, hysterectomy had been performed for the removal of a fibroid tumor of the uterus, and the patient was kept in bed for four weeks. On the third day after the operation she complained of pain above the right clavicle, which persisted for three weeks and was worse at night. In the fourth week after the operation, on the third day that the patient was up, the nurse noticed a peculiarity of the right scapula, whose inferior angle was displaced. For several months the deformity became progressively more marked and thereafter it remained stationary. From the time of the operation the patient was more or less well able to comb her hair than previously, and her disability had grown gradually worse. For three months there had been some numbness in the fingers of both hands.

Fig. 5.—Displacement of the right scapula when the upper extremity was extended horizontally at the side, after two months of treatment.

Muscular power was quite well preserved in the right upper extremity, but the member was readily fatigued and suffered somewhat from want of fixation of the scapula. After sewing and writing particularly, burning pain appeared in the right shoulder. There was some pain also in the back. The patient was pallid and complained of a sense of weakness in the abdomen as if its contents were falling. The appetite was impaired, the bowels constipated. The tongue was coated and the patient was annoyed by a bitter, coppery taste. There was no nausea or vomiting, but a sense of swimming in the head, followed by a feeling of pressure. The patient thought herself nervous, being readily agitated and easily worried. She suffered at times from slight headache and also from slight tremor.

When the patient stood erect the spine was quite straight. The right shoulder was higher than the left, and the inferior angle of the right scapula at about the level of the spine of the sixth dorsal vertebra was slightly displaced from the chest and directed inward and backward. The median border of the scapula passed obliquely upward and outward and a band apparently of muscular tissue (rhomboids) could be seen passing from this border in its lower third obliquely upward and inward, to be inserted into spines of the dorsal vertebræ. Above this was a slight depression, which was contributed to by the displacement backward, inward and upward of the inferior angle of the scapula. These features are exhibited in the photographs shown in Figs. 1 and 2, the first of which was obtained when the patient first presented herself, and the second about two months later. At first when the right upper extremity was elevated to the horizontal at the side the median border of the right scapula rode across the median line (Fig. 3), the rotation of the inferior angle becoming less from the action of the muscles attached to the upper portion of the median border, and making a depression measuring 42 mm. at its greatest depth at the inferior angle of the scapula. The deformity is exhibited diagrammatically in Fig. 4.

After two months of treatment with electricity and massage the median border of the right scapula, especi-

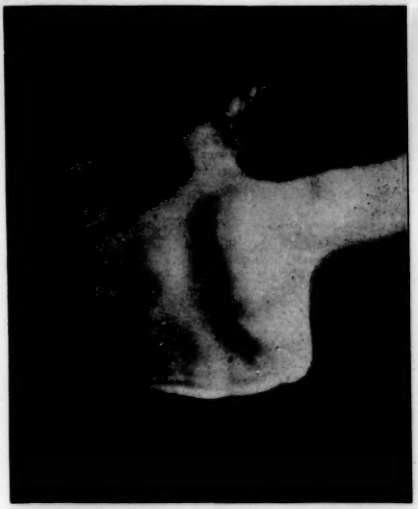

Fig. 6.—Displacement of the right scapula when the upper extremity was elevated at the side to an angle of about 75°.

ally the superior internal angle still approached the spine when the right arm was raised to the horizontal, but to a less degree than before becoming parallel with the spine when the arm was in the horizontal position (Fig. 5).

At first the patient was able to elevate the entire right upper extremity scarcely beyond the horizontal at the side, while there was no difficulty in elevating the left arm to a verfical position. Later, when the right arm at the side was continued upward from the horizontal, the superior internal angle of the scapula remained fixed and the inferior angle was rotated outward, but the right arm could not be raised entirely to the vertical position, but only to an angle of about 65 or 70 degrees with the horizontal. This is imperfectly shown in Fig. 6. When the arm was placed in the vertical position with artificial aid it could be held there for a brief period.

When the arms, after having been held out horizontally at the side, were rotated horizontally forward, the median border of the scapula receded from the chest-wall (Fig. 7), giving rise to a depression 52 millimeters deep (Fig. 8). When the upper extremities were held horizontally in front, as in the act of pushing, the displacement became more marked posteriorly, although the scapula was removed from the spine. The greatest measurement of the resulting concavity in this position was 50 mm. (Fig. 9). When this last movement was made a bundle of muscular fibers was raised from the chest, passing downward and outward from the inferior angle of the scapula, and leaving a shallow depression above and without, apparently in the muscular mass attached to the lower third of the lateral border of the scapula. When these efforts were made with the arms some twitching could be observed in the triceps.

The muscular reflexes were scarcely as pronounced on the right as on the left in the scapular region, as well as in the arm, particularly in the region of atrophy below the oblique muscular band passing from the scapula to the spine. A tap over the upper part of the infraspinatus caused the arm to be abducted, while a tap over the middle of the same bunch caused the arm to be rotated inward. A tap on the supraspinatus caused the shoulder to be raised and a tap below the outer extremity of the spine of the scapula caused the arm to be adducted. There was tenderness on percussion and on pressure over the superior angle of the scapula, more marked on the right.

Fig. 7.—Displacement of the right scapula when the upper extremity was held horizontally in front.

The right arm and forearm appeared distinctly smaller than the left, although by measurement the circumference of the right arm was found to be between 7¾ and 8 inches, and that of the left arm between 7 7-8 and 8¼ inches and that of the right forearm below the elbow 7½ inches and of the left forearm 7¾ inches. Electric examination kindly made by Dr. H. P. Boyer elicited normal responses in the supraspinatus, infraspinatus, deltoid, rhomboids and the latissimus dorsi, with degenerative reaction and slight faradic response in the upper portion of the trapezius and no response whatever to galvanism or faradaism in the lower portion of the trapezius. Despite persistent effort the serratus magnus could not be isolated.

The patient was right-handed and conscious of the weakness in the right upper extremity since the operation. The grasp measured by the dynamometer proved less vigorous on the right than on the left. The greatest difficulty consisted in bringing the shoulder, and therefore, the arm toward the head or

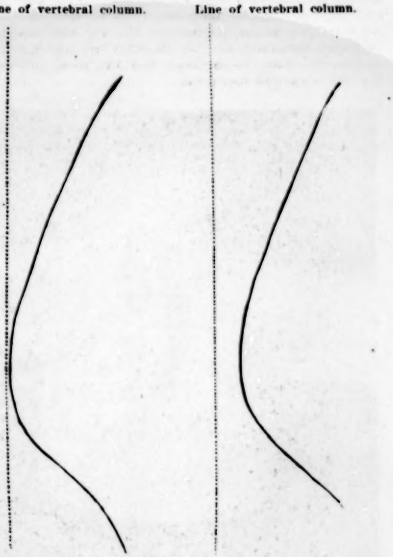

Fig. 8.—Depression caused by recession of the median border of the right scapula from the chest wall when the upper extremity was held horizontally in front.

Fig. 9.—Depression caused by recession of the median border of the right scapula from the chest-wall when the upper extremity was held horizontally in front as in the act of pushing.

the middle line or the opposite side. Sensibility was entirely preserved all about the right scapula and the adjacent spine. The knee-jerks were extremely sensitive, active, and marked. Ankle clonus could not be elicited. The action of the heart was rhythmic, its sounds clear, the second being relatively accentuated at the right base. The radial artery was small and the tension moderate. The urine was of amber color, of neutral reaction, 1024 in specific gravity, free from albumin and sugar and it contained only a few epithelial and blood cells.

The accompanying photographs exhibit fairly well the position of the scapula under varying circumstances and the accompanying diagrams exhibit the relation of the inferior angle of the scapula with the vertebral column in different positions of the arm.

On account of the obvious local wasting the condition was at first believed to be one of paralysis of the trapezius and this view was subsequently confirmed by the results of the electric examination. The deformity, how-

ever, is so typical of paralysis of the serratus magnus that although we were unable to demonstrate the presence of degenerative electric reaction in this muscle, there seems to be little doubt that it also is involved in the morbid process. The patient gave a previous history of rheumatic pains at different times in the course of the preceding five or six years, but inasmuch as the symptoms had developed only in the sequence of an operation in which I believe the Trendelenburg position was used, and in which the parts affected might readily have been subjected to pressure, I am inclined to think that her condition arose from inflammation of branches of the spinal accessory or of the cervical plexus and the long thoracic resulting therefrom.

CASE 2.—T. H., an iron painter, unmarried, white, 28 years old, was admitted to the Orthopedic Hospital and Infirmary for Nervous Diseases Jan. 4, 1900, complaining of pain at the nape of the neck and in the occipital region on the left side, which was constantly present, though worse paroxysmally. There was also jerking to and from the right, which was relieved by the application of an ice-bag. The head, under ordinary circumstances, was held constantly deflected toward the right. Sometimes pain was present over the entire head.

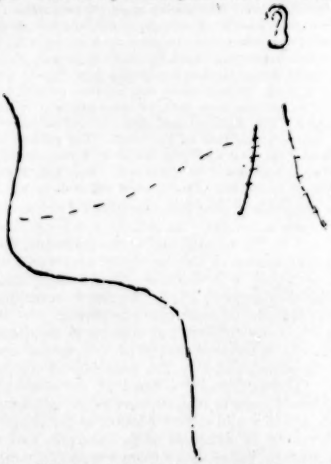

Fig. 10.—Situation of cicatrices on the left side of the neck.

Sleep was disturbed at times in consequence of the pain.

On inquiry it was learned that in April, 1897, the man had been seized with sharp, shooting pain below and behind the left half of the inferior maxilla, extending to the nape of the neck, to the occiput, to the left side of the head and to the left brow. In a short while the head began to be jerked toward the right and at times to be fixed, facing toward the right. An operation was performed in January, 1898, a piece of the nerve supplying the left sterno-mastoid (three-quarters of an inch) being excised. The nerve was also stretched, and, according to the patient's statement the ends were united, but as to the accuracy of this there may be reasonable doubt. No relief followed. About April, 1898, the left trapezius muscle or the supplying nerve was operated upon and paralysis of the left arm followed, with impaired sensibility, which persisted until the succeeding August. Some weakness was still present in this member when the patient came under observation. Improvement in the pain, the jerking and the stiffness began slowly to take place in the sequence of the second operation, and the patient was measurably comfortable from August, 1898, to about June, 1899. Since this last date, however, he had grown gradually worse, and since October he had been incapacitated for his work.

The patient presented two cicatrices on the left side of the neck, one 7 cm. long, below the ear, along the anterior margin of the sterno-mastoid muscle, the other 9 cm. long along the anterior border of the trapezius. (Fig. 10.) The interval between the muscles near the clavicle and the shoulder was painful on pressure. The lines of the cicatrices exhibited marked diminution in sensibility, both tactile and painful, growing less as one receded from them. Localization also was poor, impressions being referred sometimes to the ear, at other times toward the clavicle. Sensibility on the left half of the chest to below the level of the nipple was less acute than on the right, also on the left arm than on the right.

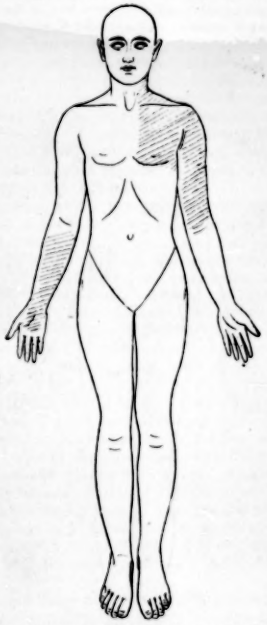

Fig. 11.—Areas of hypesthesia, ventral aspect.

arm, although at times it was less acute on the right forearm than on the left forearm. (Figs. 11 and 12.) Sometimes a single impression was felt as two, but in different situations—sometimes simultaneously, sometimes successively. There was increased rapidity of breathing, the respiration being 38 per minute at one time, and 48 per minute at another observation, and there was want of synchronousness and range in the movements of the two sides of the chest, the left rising earlier and expanding more fully than the right. Breathing, further, was somewhat labored, particularly on the left, where the auxiliary muscles were drawn upon. There was some fibrillary tremor in the muscles of the left side of the neck. The scapula occupied a winged attitude and there was apparent absence of the rhomboids on the left, giving rise to a distinct depression between the median border of the scapula and the spine.

Electric examination disclosed degenerative reaction in the left trapezius, while all of the other muscles responded promptly to faradism. A greater faradic current, however, was required to induce contraction of the left trapezius. The circumference of the right arm was 24 cm., that of the left 23. The circumference of the right forearm below the elbow was

24 cm., that of the left 23 cm. The grasp of the right hand was more vigorous than that of the left. Examination of the fields of vision by Dr. A. G. Thomson disclosed contraction, but no reversal. There was no lesion of the fundus. The knee-jerks were preserved. The action of the heart was rhythmic, the sound clear.

In the family history the only noteworthy point was the death of the father possibly from paralysis agitans. Of interest in the personal history was the fact that the patient had influenza prior to the onset of this trouble. This attack left him weak and prostrated, both nervously and physically. In his work he used mineral and graphite paints mostly, but so far as he knew he had never suffered from metallic poisoning. There was also no blue line at the margin of the gums. The man had had an attack of gonorrhea, but so far as he knew he had escaped syphilis. He partook of alcoholics, tea and coffee, with considerable freedom. He had suffered a fracture

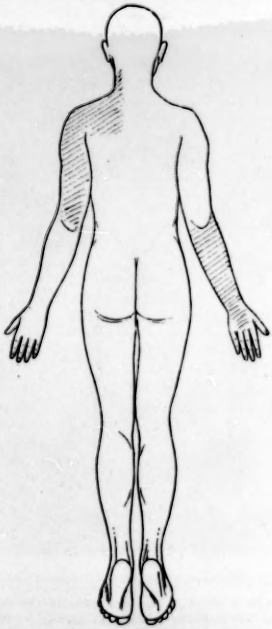

Fig. 12.—Areas of hypesthesia, dorsal aspect.

of the right leg at the age of 23 by a fall from a bridge 20 feet high. There had been no other mental or physical shock.

The accompanying diagrams illustrate the distribution of the impaired sensibility and also the situation and relative size of the cicatrices on the side of the neck.

In this case also the condition was originally looked upon as one of paralysis of the trapezius, but less attention was paid to this as the patient was more urgently desirous of relief from the distressing spasmodic condition of the head. On subsequent reflection, however, it seems probable that in addition to the trapezius and the rhomboid, the serratus magnus also was paralyzed. We had hoped to secure a photograph of the patient, but he evidently became alarmed by the suggestion of a repetition of the electric examination, which had not proved a source of enjoyment, and on going out for a walk he failed to return. Whether or not the torticollis was in any way due to the preceding attack of grip can not, of course, be determined, but the possibility is not to be ignored. That the trapezius and the serratus were then paralyzed seems unlikely, and it is far more probable that this condition followed injury or division of their respective nerves in the course of the operations on the neck. The hyperesthesia of irregular distribution is strongly suggestive of hysteria, as was in some respects also the general demeanor of the patient.

CASE 3.—G. H., a girl, 14 years old, presented herself at the hospital on Jan. 17, 1901, with the statement that following an attack of diphtheria four months previously the mother had noticed a peculiar attitude of the right scapula, which stood off from the chest when the shoulder was elevated. Several weeks later pain appeared on the posterior aspect of the scapula, where there was also tenderness. The shoulder could be retracted, and the deformity resulting on voluntary effort was thought to be due to weakness of the trapezius at least. The patient was unable to carry heavy weights or to lift heavy articles or to hold them with her right hand. At times there was pain on movement of the right arm referred to the shoulder. There was some tenderness also in front of the head of the radius. There was no apparent wasting, no fascicular twitching and the reflexes were all preserved. Station was steady, the knee-jerks were preserved, and the grasp of the right hand was more vigorous than that of the left. The action of the heart was rhythmic and its sounds were clear. The appetite was moderate, the bowels were regular and sleep was fairly good. Menstruation was regular, painful and moderate. The parents were well, as were also one brother and two sisters. Two brothers had died in convulsions, and one sister from inflammation of the brain. The patient had had measles at 7 months, whooping cough at 2 years, mumps, and also acute rheumatism at 12 years. She had suffered no traumatism, and drank three cups of coffee daily and no tea.

The patient was seen but once and a detailed study of her case was not made. As indicated, the condition was thought to be due to paralysis of the trapezius, resulting from inflammation of the supplying nerves as a complication or sequel of diphtheria. The striking and characteristic displacement of the scapula, however, makes it probable that the serratus also was paretic.

There is some difference of opinion as to whether the trapezius is innervated solely by the spinal accessory nerve, or additionally by the branches of the cervical plexus. The first and the third of the cases here recorded would seem to lend support to the latter view, inasmuch as one would expect a lesion of the spinal accessory nerve to be attended with paralysis also of the sterno-mastoid, but of which there was in neither of these cases any evidence. On the other hand, one can, of course, conceive of a lesion of branches for the trapezius rather than of the trunk of the spinal accessory at a point beyond the giving off of the branches for the sterno-mastoid muscle. In the second case, in which there was no reason to doubt the existence of a lesion of the spinal accessory nerve, both the trapezius and the sterno-mastoid were affected.

Cortical Center for the Functions of the Stomach.—Sollier locates the stomach center in the parietal lobe of the brain, and describes in the *Revue Neurologique* of November 30 a case which he thinks confirms this localization. A boy of 11 was hit on the head with a pickax and was unconscious for a week, with no medical care. He was then trephined, and the coma continued for six days longer, although he took a little liquid food. Then he roused and his prodigious appetite and perfect digestion of the enormous quantities he ate, are accepted by Sollier as evidence that the stomach center had been stimulated to hyperactivity by the trauma and resulting abscess just in front of it. The boulimia gradually subsided in the course of the third month.

DEMENTIA PRECEDING AND FOLLOWING INEBRIETY.*

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HARTFORD, CONN.

A study of the early history of inebriates, particularly of the period preceding the use of spirits, indicates the presence of psychosis, and frequently, degrees of dementia which are unrecognized at that time, but later develop into the drink symptoms.

In persons with a traceable heredity and history of degenerative parents, neuro-psychopathics are easily recognized, but in others who have no hereditary history and seem well up to the beginning of the drink period, previous psychoses have not been studied or recognized.

The theory prevails in most circles of medical literature that the onset of inebriety is a mere chance condition, or an accident which might have been prevented, and is largely under the control of the person. There has been no recognition of an earlier preliminary stage leading up to the alcoholic psychoses. This failure has resulted in confusion and conflict of theory and treatment, with consequent quack remedies and charlatan means for cure and prevention. When this early preliminary stage is examined in persons without any hereditary history, many distinct neuro-psychoses appear associated with changes of character, conduct and physical vigor.

A grouping of some of these conditions will be of interest and throw light on the mysteries which surround the history of the cases. In a general study it would appear that traumatic and chemical injuries are often followed by the use of spirits. Of traumatic causes, early injuries, such as blows and falls on the head, broken legs or contused wounds, with periods of invalidism, more or less severe, are most common. Many persons have a history of such injuries, attended with unconsciousness, great feebleness, slow recovery, and much debility and pain, with nervousness; they suffer from distinct changes in health and vigor. When these causes occur before puberty, this period is often followed by a disappearance or interruption of all the symptoms enumerated. If they occur after puberty, in early manhood, often complex neuroses follow, which lead up to inebriety. Cases of this class may be outlined in the following examples:

A boy, 10 years old, in previous good health, received a concussion from a fall, and after a long convalescence suffered from morbid fears when on high places, and was extremely sensitive to every possible danger from falls and other injuries. At puberty these fears developed into hysteric states of alarm at falling from wagons or from windows of houses which he was in. From this he slowly recovered, and later began to use spirits to give him courage to walk over a bridge on the street he lived in.

In a second example, a young boy of 18 suffered from contused wounds in a runaway accident. He was unconscious, and afterwards suffered from great nervousness, never regaining his customary strength, and showing extraordinary timidity for a long time. Then he began to use spirits, and this nervousness passed away.

A class of injuries in which great mental excitement precedes and is associated with some accident, frequently induce the use of spirits. Thus, a healthy man was in great peril from drowning, and escaped with but slight injury and shock. The effect of the psychical shock was diminished vigor and strength, which continued for a few months, and then he became a drug-taker and later used spirits.

In another case, two men, both temperate and well, were severely shaken by a railroad accident. The alarm and sudden peril of impending death so impressed them that for a time they were partially paralyzed. A long period of invalidism followed, ending in both using spirits and drugs.

Many very marked cases have been reported of persons who from sudden profound grief at the loss of friends or members of their family, have become invalids, and afterwards developed inebriety. Sudden overwhelming joy has likewise produced profound disturbances of the co-ordinating centers, and afterwards culminated in inebriety. These traumatic causes include almost every possible injury in which there is associated with the physical injury great mental disturbances and depressions. Common injuries associated with drains upon the system, such as protracted hemorrhage or mental strains following pain and suffering, leave an impress on the nerve centers which can be traced in changes that develop spirit and drug-taking.

Many cases which have histories of sudden, unexpected development of the drink psychosis can be referred back to fevers, inflammations and acute diseases which have left a profound impression on the nervous system. Thus, a typhoid or pneumonia, with a long period of convalescence, marked by distinct mental symptoms and extreme prostration, impairs the vigor and leaves entailments which develop the drink psychosis. Sunstroke and heatstroke are also causes which seem to alter and change the normal rhythm and vigor of life, leading to the same results.

It is claimed that a large majority of nervous cases treated with alcohol have developed spirit or drug psychoses in later life, particularly persons who had suffered injuries or diseases which were followed by great exhaustion and long convalescence. In such cases dementia is marked, but it is difficult to say whether the dementia following from alcohol was due entirely to the alcohol given as a remedy for the neurosis or to the injury produced by the disease, but at all events their frequency and intimate association point to cause and effect.

A second class of causes which are becoming more and more apparent from careful researches may be termed chemical or autogenetic. The chemical poisons are intoxications from alcohol or drugs. The profound stupor and delirium which follow from an excessive dose of alcohol taken for the first time may so profoundly impress the system as to leave it permanently injured. Many instances are recorded of persons whose invalidism and debility dated from the first intoxication. They may never use spirits again until middle life or later, but the mental and physical impression dating from the first intoxication has been so pronounced that there can be no doubt of its persistence. Cases like the following are not uncommon:

A young man at the time of his graduation from college became profoundly intoxicated. The depression, both physical and mental, following this event continued for years. Then he was given spirits as a medicine in typhoid fever. From this time he became an inebriate.

A second case was that of a temperate man who, after a snake bite, consented to drink large quantities of spirits until he became intoxicated. He recovered, but was

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never well after this, always complaining of debility and mental dread of disease and death. Some years after he suddenly began to use spirits to excess, and became an inebriate.

Cases are not infrequent of persons who have taken large quantities of spirits without a visible exciting cause, and become suddenly intoxicated, recovering with great mental depression, and ever after showing changes of character and conduct that finally developed into inebriety. A few cases have been mentioned where profound narcosis from opium has resulted in some obscure changes and final inebriety. A dose of arsenic taken by mistake, producing gastritis, was followed by a long period of indigestion and invalidism, and finally ended in spirit excess. No doubt there are many cases of this kind in which the early causes are overlooked, but from the few cases reported it is evident that a severe poisoning of the system from either vegetable or mineral drugs not infrequently precipitates states of degeneration and dementias which lead up to drug and spirit taking.

Another field of early poisonous influences has been traced to the formation of toxins in the body. Persons who have neglected many of the common rules of living, and who suffer continuously from what is termed dyspepsia and imperfect nourishment, frequently develop states of mental debility which go on in a progressive march to inebriety or some complex form of insanity.

Cases like the following are often noted: A temperate man, from neglect and defective eating, became a hypochondriac with delusions about food; he suffered from an attack of fever and began to use spirits to great excess, and died from delirium tremens.

Persons who overwork, and are in constant mental strain without proper rest, and who neglect the nutrition of the body, frequently have periods of invalidism and defects which lead up to inebriety. The underfed and the overfed who neglect the ordinary rules of living are subject to auto-intoxications and auto-infections which profoundly impress the organism and develop some disease later. In the study of a large number of cases, many of these common conditions of poisoning have been prominent in early life and have caused debility and invalidism, which has finally culminated in the drink craze. Some of these cases develop a drug-taking mania with the hope of curing real or imaginary diseases, accompanied with fears of death and intense desire to avoid pain and discomfort. They are often tea and coffee drinkers, and have fads in regard to foods, with intense introspection and constant watchfulness to discover signs of oncoming disease. They frequently develop inebriety. In such cases there are many symptoms of dementia, with mental change and debility. In some instances this is apparent in certain organic changes of the body; in others it is seen in the general decline and failure of the functional activities. The mental vigor and power of restoration grows less, and exhaustion increases and becomes more and more prominent.

In the second class of causes, namely, dementia coming from spirits taken regularly in small quantities, or at intervals to excess, the symptoms are more pronounced and more readily treated. The man who uses spirits continuously to excess will always exhibit changes of both the mental and physical organism, which at first may be slight, but which increase steadily. The delusion that it is possible for any one to drink regularly any length of time and not suffer from it is dispelled by the study of such persons.

Dr. Clouston writes: "I am confident that no man who uses spirits continuously, even though he is never intoxicated or never appears to have any mental impairment in his social and business relations, is physiologically changed for the worse. If the practice goes on for ten years serious organic changes will follow, and in most cases, in much less time."

Many persons use spirits daily and boast of their strength to drink in moderation and not be injured. This is a delusion. They may possess inherent strength which will resist degeneration for a time and mask the symptoms, but in the end the dementia which is inevitable from this source will appear. Many such persons carry on business along accustomed lines without much change, but their real condition is apparent when called to take up some original work or engage in some activities requiring originality, spontaneity and vigor. Usually some intercurrent disease appears, with fatal termination, or some form of invalidism which is ascribed to other than the real causes.

The evidence of dementia is more apparent in so-called moderate drinkers who use spirits continuously than in those who take spirits to excess at times and follow indulgence with a free interval of sobriety.

There is in persons who use spirits continuously, or occasionally to excess, a tendency to assume one of three forms of degeneration: 1. The periodical drinker belongs to the epileptoid class where distinct exacerbations and explosions of nerve energy are apparent. 2. The continuous or so-called moderate drinker is of the paretic class. 3. The irregular, uncertain user of spirits is of the insane or maniacal class with a constitutional tendency to mania and melancholy. In all these cases there is a progressive dementia, sometimes masked; at others there are apparent degrees in which both character and conduct undergo a progressive change.

Many of these persons while following accustomed lines of thought and conduct seem very little impaired, yet a careful examination will show more and more automatic activity, less spontaneity and less original work. If thrown out of their accustomed line of life the feebleness is at once apparent. Their inability to take up new subjects, or to act wisely upon a new class of facts is often startling. Thus, a so-called moderate drinker who apparently conducts his business with skill and judgment, will show idiocy in his estimate of new questions and new requirements. Some of the most extraordinary and unexplained acts of men previously sound and wise in their accustomed line of work are explained in this way. Thus, a business man and continuous drinker whose business was conducted with skill and acumen accepted the position of counsel and adviser to a large estate, the investments of which were new in his experience. His imbecility and childishness wrecked the property, and his responsibility was settled in the courts to his great disadvantage. The chagrin and sorrow of this event caused his mental breakdown and death. In reality he was demented before he took up this new business, and yet his friends did not recognize the fact.

Almost innumerable instances occur of the failure of moderate or occasionally excessive users of spirits to adapt themselves to new conditions with the same judgment exercised in their accustomed line of work.

The epileptoidal cases have distinct periods of egoism and over-confidence in their ability to grasp new situations and to control new events. This is a most suspicious symptom, particularly when associated with the constant use of spirits or drugs.

In the epileptoid cases there are distinct paroxysms during which the demented states are readily recognized. Sometimes these paroxysms last many days or weeks before recovery. The mistake is made by friends who suppose that recovery leaves the brain intact, and capable of acting normally and as wisely as before. If the man continues his old business and family relations, taking them up after the attack in about the same way, there is no opportunity to show the damage done, because the work is largely automatic. The mental failure and demented condition would be apparent if these persons were required to take up some new work or enter upon new conditions of life and living. Then the excessive nervousness, feebleness of judgment and instability of connected thought or act would appear.

In the maniacal and melancholic cases, there is the same uncertainty of thought and act, with extreme sensitiveness to conditions and surroundings and exaggerated conceptions of events and their influence. In many of these cases there are symptoms of malaria, rheumatism, neurasthenia and heart failure, with general muscular and mental fatigue. These conditions suggest spirits as a remedy, which only intensifies the very conditions they seek to prevent. They are in reality stages of dementia which should be recognized and treated by change of surroundings, habits of living, and conduct generally.

Associated with the continuous or occasional use of spirits there are always found changes of nutrition. The metabolism of the body is always broken up and the presence of toxins and toxemias are common in all cases. How far these poisons contribute to the dementias present it is difficult to determine, but that they exist and have an influence can not be doubted.

It is now recognized that notwithstanding the apparent immunity which is provoked in the system by the regular use of spirits, there is a continuous shock or concussion to the higher brain centers as an effect of alcohol.

These concussions are literally anesthesias and paralyzants, which depress and alter nerve activities, at the same time breaking up the nutrition, so that in addition to palsy and depression, there is starvation and weakness. The effect of the continuous use will be really an intensification and persistency of effect from which recovery becomes more and more doubtful. A certain number of these cases go on to develop well-marked symptoms of dementia, which is described often as "alcoholic epilepsy" or "general paresis" from alcoholism, or "alcoholic insanity," with mania and melancholia. These are names for the extreme stages of the disease.

Most of the cases die from intercurrent disease before these stages become prominent. Pneumonia and acute inflammations of the liver and kidneys, with heart failure, are the more common forms of terminations, but are indirectly caused by the use of spirits.

In many cases cerebral hemorrhages occur, either causing death or partial paralysis, which continues during the rest of life. Accidents are responsible for a large number of deaths. The paralysis extends to the senses, impairing their power and thus increasing the liability to injury, and when such injury occurs the resisting power of the system is so impaired that full recovery seldom follows.

The craze for drugs and medicines in these drink cases is another phase of dementia. Persons of previously good, sound judgment in other matters will show infantile credulity and confidence in strange methods and unreasonable means that promise help and freedom from pain. This is seen in the unusual demand for certain proprietary drugs which contain spirits, opium, or other narcotics. After a period of the use of certain drugs they are abandoned and others take their place. Such persons, if wealthy, make long tours to different watering-places, health resorts and sanitariums in search of health, and are always dissatisfied. In the meantime they continue the use of spirits at intervals or constantly. There is always a failure in the system, a state of unrest and discomfort, which they seek to overcome by chemical means. Dementia is also apparent in the gambling spirit and craze for making money rapidly, dealing in stocks, and new ventures or short cuts to fortune. This in a drinking man is often pronounced, the same as the erotic impulse manifest in sexual intrigues and infidelities. These and various other symptoms are seldom recognized as having a pathological basis, but are always explained by moral theories.

The moderate drinker, who is a gambler, or sensualist, or delusional politician, is a dement, and should be recognized as such. The moderate drinker who is delirious at times, or intensely melancholy with suicidal symptoms, is also a dement, and should be treated as such.

In the treatment of these cases, the removal of alcohol is of the first importance, but this will not always cure. Serious damage has been done, and the use of alcohol is not a cause, but often a symptom, and as a symptom it indicates greater intensity and increase of the causes.

The presence of poisons and starvation should at once suggest the remedies which are not found in drugs or specifics, but in eliminatives and nutrients, with continuous hygienic care. The nutrition of the body must be corrected, and all sources of poison removed, and long continued nerve and brain rest be secured.

The exhaustion and general debility occurring in persons who have previously been very actively engaged in mental or muscular work, may be the first stage of dementia, and alcohol given as a tonic may have special degenerative action on the brain and nerves, and become a powerful exciting cause.

If there is a tendency to any special form of psychosis, alcohol will increase it by bringing new poisons and destroying the vigor of the body, as well as the functional power or repair and elimination.

States of cerebrasthenia and general exhaustion treated with compounds of spirits, as wines and beers, frequently develop into inebriety and other marked psychoses. Hence alcohol in any form is a dangerous remedy, and its so-called tonic effects in debility are doubtful and perilously uncertain. Any long continued use of alcohol should suggest dementia as a most natural sequence, and the treatment must be based on this prognosis.

The general facts I wish to make prominent are:

1. States of dementia precede inebriety and become both predisposing and exciting causes.

2. The continuous or occasional use of spirits is often followed by dementia in many forms.

3. All use of spirits reveals certain degenerative tendencies along the marked lines, viz., the paretic, the maniacal, and the demented or idiotic types.

4. Alcohol as a tonic is dangerous by increasing the toxins and conditions of poisons with starvation, and should never be used in brain and nerve psychoses or any other condition of neurosis.

5. Alcoholic psychosis in every form should be care-

fully studied before treatment can be given with any degree of accuracy.

DISCUSSION.

DR. C. A. DREW, State Farm, Mass.—I am in hearty sympathy with Dr. Crother's paper. I believe that by habitual drinking a man's inhibitory power becomes impaired, particularly that associated with the higher functions of the brain, which we term the moral sense. I believe the habitual moderate drinker will think differently and act differently, where ethical considerations are involved, than he would think and act were he not a moderate drinker of alcoholics. This is a manifestation of the lesser subtle effect of regularly repeated small quantities of alcohol circulating through a fairly good brain. When weaker brain cells are daily subject to the stimulating or anesthetizing influence of alcohol, according to the dose, there is no question about the resulting condition deserving the name of dementia. More than a thousand cases were committed for drunkenness to the prison department of the State Farm in Massachusetts last year. While many of these men are intelligent, in the common sense, they all seem lacking in moral sense; hardly one ever intended to be anything more than a moderate drinker. These men seldom blame themselves. They have unlimited faith that they can drink or let it alone. They do not appreciate their own weakness nor their obligations to others. I think it is fair and scientific to call these men demented. There were 77 men patients admitted to the Massachusetts State Asylum for Insane Criminals during the last fiscal year; 64 of the 77 cases admitted were free drinkers. No reliable history could be obtained from 7, while 6 were abstainers or only moderate drinkers. There was a clear history of intemperate fathers in 38 of these cases, and 10 of the cases testified that their mothers had been hard drinkers. One of the 6 temperate cases was a moral imbecile whose father and mother were both hard drinkers, the former having suicided while insane. We occasionally meet an imbecile child of an intemperate father and mother who has no taste for alcohol, tobacco or other drugs. This deviation from the rule may perhaps be due to the revolt of a developing organism against super-saturation while in the embryo.

DR. CROTHERS, closing the discussion—The subject of inebriety will probably receive a fuller discussion at future sessions of the Association. Every year brings us nearer to this great dark wall of alcoholism, and neurosis which can not much longer be neglected by physicians.

DYSPEPTIC ASTHMA.*

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Asthma due to digestive disturbances was first described by Henoch[1] under the name of asthma dyspepticum. The original communication of this clinician referred to the occurrence of the condition during acute digestive disturbances in children. His cases all ran under alarming symptoms—the dyspnea being of a high degree and attended with cyanosis and cold extremities—and failed to improve under the ordinary stimulants, but entirely recovered after a treatment directed against the disturbances of the digestive tract. In his paper Henoch accepts Traube's explanation for the dyspeptic origin of asthma, which is as follows: "The gastric irritation causes reflexly a vasomotor contraction of the small arteries, which explains the cold extremities, the imperceptible pulse, the congestion in the venous system and in the right heart, cyanosis, accumulation of carbon dioxid in the blood and as a consequence thereof the frequent dyspneic respiration."

A short while afterwards Silbermann[2] described four cases of dyspeptic asthma which were identical with those of Henoch. Silbermann assumes the presence of a paralysis of the inhibitory fibers of the vagus as well as of the heart itself. On this account the ventricles, especially the left, can not empty themselves completely, and as a result of this there is a stagnation in the pulmonary circulation and the right side of the heart. Owing to the disturbance of circulation the blood becomes overcharged with carbon dioxid, which in turn causes the dyspnea, cyanosis and cold extremities. Edema of the lungs need not be present, as the paralysis of the left ventricle is only of a moderate degree.

While the two writers just mentioned discussed the subject of acute asthma in children, Barrié[3] was the first to describe cases of dyspeptic asthma of a more or less chronic nature in adults. He first showed the intimate relations existing between stomach, heart and lungs, and entered in detail upon our subject of dyspeptic asthma. He says: "Cardiac complications, the result of certain affections of the stomach or bile ducts, present a very great variety in their symptomatology and prognosis. Sometimes there are only slight disturbances in the frequency, intensity or regularity of the heart-beat; sometimes the symptoms approximate those of angina pectoris; at other times the symptoms refer both to the heart and to the lungs; dyspnea then sets in, which may amount even to suffocation, and at the same time dilatation of the right ventricle of the heart may be diagnosed. The disorders are characterized by a respiratory embarrassment varying from the merest feeling of oppression to true dyspnea; at times even we have orthopnea, which may lead to suffocation. Whatever the clinical form may be, the respiratory difficulty appears immediately after meals, the quantity of food having no influence upon its appearance. With predisposed individuals the smallest morsel suffices to evoke an attack. Chomel, who observed the dyspnea of certain dyspeptics, says: 'The patients, after having taken merely a few spoonfuls of soup, experience a respiratory embarrassment of a more or less severe nature lasting throughout the whole time of digestion.' We have here then a very special kind of dyspnea, independent of any distension of the stomach by gas during digestion, differing also from the transient and purely mechanical kind of oppression, observed in large eaters after a copious meal. It is not in the respiratory tract that the obstacle is to be looked for, but in the pulmonary circulation. However that may be, the air hunger, not being appeased, soon produces inexpressible anguish with imminent asphyxia. The face, at first pale, is covered with cold perspiration and becomes purple, especially around the eyes, lips and cheeks. The extremities are cold and livid; the pulse is accelerated, soft and compressible. The pupils are dilated; speech is impossible; the body immobile, excepting the thorax, which works incessantly, and the patient appears in great danger, as if he were about to succumb to an attack of suffocation. Digestive troubles being the cause of these cardio-pulmonary symptoms, therapeutic intervention must be directed to the stomach. We have two indications to meet: 1, to put the organ at rest; 2, to supply it with food of an easily digestible nature. A milk diet answers most admirably both these purposes."

Lauterbach[4] next described a case of dyspeptic asthma. The patient had been suffering for three years from severe dyspnea, occurring as a rule from three to four hours after meals, preceded usually by malaise, vertigo and occasionally even by fainting spells. These attacks lasted one-half to one hour and ceased after patient vomited. In dyspeptic asthma, according to Lauterbach, we

* Read before the Buffalo Academy of Medicine, Oct. 8, 1901.

have to deal with a reflex disturbance of the cardiac action and especially a temporary inability of the left ventricle to perform its work, a condition that is present also in cardiac asthma, but only as the result of a grave organic lesion. The dyspnea accompanying the attacks of dyspeptic asthma is the result of a stasis of the pulmonary circulation due to the insufficiency of the left ventricle.

Oppler[5] likewise reports a case of dyspeptic asthma. Patient suffered from hyperchlohydria and hypersecretion. In the fasting condition there was found in the stomach a small quantity of bile. A rational treatment of the stomach—lavage—was accompanied by the disappearance of the asthmatic attacks.

Boas[6] published an important communication on this subject. He described eleven cases, four of a light and seven of a severe nature. In the latter group were included: 1, individuals with disturbances of the circulatory and respiratory apparatus, and 2, such in whom the thoracic organs were normal. In both classes, however, a connection between the attack and the ingestion of food could be demonstrated.

Ehrlich[7] reported a case of dyspeptic asthma in a patient who had previously suffered from regular asthma caused by nasal polypi. After removal of the polyps the asthma disappeared. Following a grave indiscretion in diet the new type of asthma developed, characterized by the occurrence of an attack immediately after eating. It began with a painful feeling of oppression in the region of the stomach and did not subside until the patient had vomited everything, either voluntarily or against his will. The heart in this case was not normal and treatment had to be directed toward that organ as well as the stomach. Lavage of the stomach and strophanthus effected a cure.

Murdoch[8] describes a form of chronic dyspeptic asthma characterized by great shortness of breath on slight exertion, the condition being not paroxysmal but continuous. It occurs in patients suffering from gastro-intestinal diseases without any abnormal condition of the heart, lungs or kidneys, sufficient to account for it, and yields readily to treatment directed against the existing dyspepsia. Murdoch reports five cases, in three of which achylia existed.

Among the cases described by Barrié one was also characterized by the occurrence of asthma on slight exertion after a meal. He says: "Since four months this young girl complains of a feeling of oppression occurring immediately after meals and lasting several hours, which obliges her to stop all work; at times the attacks are brought on by walking; she must then sit down or rest for nearly a quarter of an hour."

Dyspeptic asthma being a condition that is not so very rare and of great importance for the practitioner, is well worthy of consideration. A report of my own observations on this topic will possibly be of interest. Although Boas and others have described among their cases of dyspeptic asthma patients who were also troubled with cardiac or pulmonary affections, I am of the opinion that we should reserve the term "dyspeptic asthma" for cases free from any involvement of the chest organs and in which the affection is in distinct connection with the digestive apparatus. Wherever there are cardiac or pulmonary troubles it is best not to group these cases in our category. Even if the symptoms be more predominant shortly after meals, the principal lesion causing the dyspnea in these instances lies in the affected thoracic organ and not in the stomach. It is quite natural, and it may be observed in a great number of cases of cardiac or pulmonary asthma that during gastric digestion, especially after a good-sized meal, there is more dyspnea present.

In the last few years I have observed 31 cases of dyspeptic asthma in which the chest organs were apparently in normal condition. These cases can conveniently be classed into two main groups: 1, cases in which dyspeptic asthma appears in an acute form, periodically; 2, cases in which dyspeptic asthma assumes a more chronic type.

The first group is characterized by the occurrence of attacks of asthma at more or less prolonged intervals, either without an apparently preceding cause or after distinct excesses in eating, drinking, smoking or after undue excitement. The attack is usually of a very severe type, often assuming alarming symptoms—extreme dyspnea, cyanosis, almost collapse. A good instance of this group is represented by the following case:

Cyrus P., 33 years old, has been troubled for the past two years with frequent attacks of dyspnea. They usually occur at night before retiring. The patient becomes aware of a feeling of constriction, starting in the epigastric region and extending along the chest. Very soon after this there is great difficulty in breathing—dyspnea. The heart action is accelerated; the extremities become cold and the forehead is covered with perspiration. The patient gasps for air and feels as if he is going to die. He constantly makes efforts to expel gas by mouth or anus, and succeeds only from time to time. This affords him very slight momentary relief. After the struggle has lasted about half an hour, intense retching sets in which, after a while, terminates in spontaneous or involuntary vomiting. The latter marks the end of the attack. The patient then breathes much easier, and after a few minutes falls into a sound sleep. Such attacks appear about once in a fortnight. Often it occurs after some festivity at which patient took a luxurious dinner. Patient smokes a great deal, but has otherwise good habits.

The examination of the chest organs did not reveal anything abnormal. The stomach was slightly dilated, extending down to the navel, and showed a condition of moderate hyperchlorhydria. The urine was normal and the knee-reflex present. The treatment consisted in the application of bromids, alkalies and a rational diet. The attacks decreased in number and severity, but did not entirely disappear.

The second group, that of chronic dyspeptic asthma, embraces the larger number of cases, and may again be divided into two separate categories: (a) cases in which the attacks of asthma appear quite soon after meals, either without any particular provocation or after some slight exertion; (b) cases in which the attacks usually occur two or three hours after meals, either spontaneously or again after some exertion—walking, etc. In a certain number of the latter category the attacks can be checked by partaking of a small amount of food.

Cases belonging to category (a), of group 2, resemble very much true angina pectoris, which is so often encountered in arteriosclerosis of the coronary arteries. Their differentiation from the latter is often very difficult. For even in true angina pectoris, at the beginning there will be attacks without any discoverable lesions of the heart or blood vessels. Such cases may for a long time appear as dyspeptic asthma until all of a sudden there are distinct signs indicating the heart involvement, as, for instance, a sudden appearance of albumin in the urine or irregularity of the pulse, etc. I may be permitted to report a case of this kind:

Mrs. Jeannette A., about 67 years old, had been troubled for the last two to three years with frequently-occurring attacks of dyspnea on exertion soon after meals. Thus the patient would

have an attack of dyspnea if she walked a certain number of blocks a half hour or so after a meal; climbing of stairs would also be liable to produce the same result. As a rule the attack would not be very severe nor last long. The patient, after resting about fifteen or twenty-five minutes, would feel relieved. It appeared that the amount of nourishment taken was also of paramount importance with regard to the occurrence of the attacks. Large meals with exertion soon afterward were more liable to produce an attack than walking after a small meal. In the fasting condition or several hours after a meal the patient never had an attack even after walking greater distances. At first the chest organs, particularly the heart, were found perfectly normal.

A year or so later, however, the attacks appeared more frequently and with greater intensity, and now occasionally there was irregularity of the pulse, and albumin was sometimes found in the urine in very small quantities. The heart now was found to be somewhat enlarged to the right. One of the attacks later on was so intense that patient fell into a condition of collapse. A few weeks later there was another attack followed by edema of the lungs, from which, however, patient rallied after energetic stimulation—dry cups, camphor injections, ether, etc. Ultimately (about a month later), however, she succumbed to another attack of edema of the lungs.

True cases of dyspeptic asthma belonging to group 2, category (a), are the following:

CASE 1.—April, 1896, James H., 56 years old, has been complaining for the last year of poor appetite, bloated feeling, constipation and attacks of dyspnea shortly after meals, especially after some slight exertion. These attacks vary in intensity, sometimes being quite severe, at other times again of a slight nature; when severe, there is also a feeling of fear present as if the patient were going to die. A thorough examination revealed no abnormalities whatever in the chest organs. The stomach was not dilated, but the chemical examination showed total absence of gastric juice and all other signs characteristic of achylia gastrica. Patient was told to live on a principally vegetarian diet and was also given fluid extract of condurango, and fluid extract of cascara sagrada. Very soon after instituting this regimen patient began to improve, gradually gained in weight and was free not only from the dyspeptic symptoms but also from the attacks of dyspnea. Patient since then has felt perfectly well up to date, which means a period of five years; the achylia, however, has persisted.

CASE 2.—David M., 35 years old, began to complain two and a half years ago of disturbances of digestion. He had a feeling of tension in his stomach, and suffered from headaches and constipation. For about a year he has complained of attacks of dyspnea either a half-hour after large meals or when his stomach is empty—i. e., a short time before meals. He claims that it is difficult for him to get air during the attack; after bringing up gas he feels somewhat relieved. Before going to bed and during the night patient frequently has similar attacks. He himself uses the expression "forced breathing" to denote the mode of respiration. The attack usually lasts about an hour. Patient also says that besides the dyspnea he experiences pain on the right side a little above the ensiform process. His appetite has always been good, but there is much eructation of gas. He has lost 22 pounds and weighs now 170 pounds. Heart and lungs are normal, stomach is not enlarged, its lower margin lying three finger widths above the navel. The urine contains neither sugar nor albumin. An examination of the stomach contents reveals normal conditions.

The differentiation between dyspeptic asthma belonging to this category and true angina pectoris is not always easy. As a rule, however, cases of dyspeptic asthma are amenable to treatment; that means that a rational régime with regard to the digestive apparatus is followed by good results. These cases also are often capable of a permanent cure. Cases of angina pectoris, however, caused by cardiac lesions—if the latter are not manifest—are much less amenable to treatment, and if improved, the amelioration is only transient.

The following case is mentioned as a good illustration of attacks, like those in category (b), occurring two or three hours after meals, either spontaneous or again after some exertion:

William H. A., 46 years old, has been complaining for the last six months of some distress in the upper part of the abdomen, appearing usually about two or three hours after meals and lasting for an hour or two. Frequently the distress would be accompanied by attacks of dyspnea so that patient would not be able to move and would have to keep perfectly quiet, struggling for breath. The attack of dyspnea would last from one-half to three-quarters of an hour, when retching would ensue and be followed by vomiting. This would bring relief of the distress as well as of the dyspnea. Similar attacks occasionally occurred about 12 or 1 a. m. at night, awaking patient in the midst of a profound sleep.

A thorough examination did not reveal any apparent abnormal conditions existing in the chest. The urine was free from sugar and albumin. The gastric secretion, however, indicated a condition of intense hyperchlorhydria.

Treatment instituted against this disturbance of the stomach very soon relieved the patient of all his troubles. He has remained well for the last two years, having no more attacks.

A good instance of the dyspeptic asthma being checked by the partaking of food is the following:

Leopold K., about 54 years old, has been complaining for the last ten years of an intense burning in the stomach appearing an hour or two after meals. At this time any slight exertion would bring on an attack of quite intense dyspnea. The partaking of food or drink would very soon check the attack and patient would be able to continue his work. Here also aside from hyperchlorhydria nothing abnormal was found and a rational treatment of the latter condition greatly diminished the paroxysms of dyspnea.

The remaining cases of dyspeptic asthma observed by me I beg to submit in a concise form in the accompanying table.

TABLE OF THE REMAINING CASES OF DYSPEPTIC ASTHMA.

Group.	No.	Name.	Age.	Condition of stomach secretion.	Position of abdominal organs.
1. . .	1	Daniel M. . .	36	Hyperchlorhydria and hypersecretion.	Entroptosis, ren mob. dext.
" . .	2	Miss F. P. . .	32	. . . . .	Entroptosis, ren mob. dext.
" . .	3	Wm. H. A. . .	52	Hyperchlorhydria . .	Normal.
" . .	4	Adolf E. . . .	48	Euchlorhydria . . .	Normal.
2 (a)	5	Dr. W. F. R. .	40	. . . . .	Normal.
" . .	6	Louis G. . . .	36	Achylia gastrica . .	Normal.
" . .	7	Wm. F. . . .	33	Achylia gastrica . .	Hepatoptosis.
" . .	8	Mrs. A. K. . .	36	Hyperchlorhydria . .	Normal.
" . .	9	Mrs. F. H. . .	50	Euchlorhydria . . .	Normal.
" . .	10	Alex. G. . . .	27	. . . . .	Hepatoptosis.
" . .	11	Joe H.	40	Euchlorhydria . . .	Normal.
" . .	12	Louis R. R. . .	37	. . . . .	Normal.
" . .	13	Herm. L. . . .	40	. . . . .	Hepatoptosis.
" . .	14	H. H.	50	Achylia gastrica . .	Normal.
" . .	15	Abraham M. . .	46	. . . . .	Hepatoptosis.
" . .	16	Ferd. B. . . .	43	. . . . .	Normal.
" . .	17	Frank F. . . .	42	Hyperchlorhydria . .	Normal.
" . .	18	Carl H. . . .	37	Hyperchlorhydria . .	Atonia ventriculi gastroptosis.
" . .	19	Mrs. W. R. R. .	35	. . . . .	Normal.
" . .	20	J. I. S. . . .	55	Hyperchlorhydria . .	Normal.
" . .	21	M. W. M. . . .	63	. . . . .	Atonia ventriculi.
2 (b).	22	Mrs. A. R. . .	42	. . . . .	Normal.
" . .	23	Herm. M. . . .	53	Hyperchlorhydria . .	Normal.
" . .	24	John K. . . .	55	Hyperchlorhydria . .	Normal.
" . .	25	H. W.	58	Hyperchlorhydria . .	Normal.
" . .	26	Abr. P. . . .	36	Hyperchlorhydria . .	Hepatoptosis.

A great many of my cases of dyspeptic asthma have been examined with regard to the secretory condition of the stomach. Although no constant anomalies were found, it is noteworthy that a considerable number of the patients suffered from achylia gastrica; hyperchlorhydria likewise was often encountered. In both these conditions a rational treatment of the gastric affection was frequently crowned with favorable results as far as the disappearance of asthma was concerned. The explanation why two such contrary conditions may pro-

duce the same phenomenon may be found in the fact that in both probably an undue irritation of the gastric mucosa takes place. In hyperchlorhydria it is the hyperacid gastric juice, in achylia the mechanically unchanged coarse particles of food, which irritate the mucous membrane of the stomach and thus reflexly the vagus fibers.

In those cases in which the gastric secretion is more or less normal it will be necessary to assume a condition of hyperesthesia of the stomach in order to explain the cause of the asthma. This was already done by Boas.

In my paper on "Floating Liver,"[9] I have drawn attention to the frequent occurrence of asthma in these cases. In fact, a considerable number of patients with floating liver manifest no other symptoms aside from the existing asthma. The cases of dyspeptic asthma referred to in this paper have all been examined with regard to the existence of any abnormal position of the abdominal organs. Floating liver was noted in a considerable number (5) of these cases. There is hardly any doubt in my mind but that the abnormal position of the liver, dragging the diaphragm downward, is the cause of the existing dyspeptic asthma in these cases.

The treatment must be directed first toward relieving any existing disorders of the digestive tract; second, toward correcting any abnormal position of the abdominal organs, principally the liver. A regular mode of life, avoidance of too much tobacco and alcoholic drinks, also of too much mental worry and strain is always of importance. By paying attention to these points the majority of cases of dyspeptic asthma will not only be temporarily relieved, but often radically cured.

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THE IMMEDIATE DIAGNOSIS OF BLASTOMYCETIC DERMATITIS.

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As regards location, Chicago has developed the greatest number of the cases of blastomycetic dermatitis so far reported. Dr. Hyde's list published in the Proceedings of the American Dermatological Association held in Washington, May, 1900, includes 17 cases, as follows: Gilchrist-Duhring, 1; Busse-Buschke, 2; Gilchrist-Stakes, 3; Wells-Senn, 4; Hessler, 5; Hyde-Hektoen, 7; Anthony-Herzog, 8; Coates, 9; Owens-Eisendrath-Reody, 10; Brayton, 11; Hyde-Ricketts, 12; Hyde-Ricketts, 13; Montgomery-Ricketts, 14; Montgomery-Ricketts, 15; Montgomery, 16; Dyer, 17.

To these I now add a second case, under my observation from April 17 to May 31, at which time the patient was discharged cured. Other cases were no doubt reported at the May meeting of the American Dermatological Association, Chicago, May 31 and June 1, as the program states that Dr. F. H. Montgomery, Chicago, had two additional cases to report, and in company with Dr. J. W. Walker, a report of a previously recorded case with systemic infection, death and autopsy.

The disease occupied much attention at the Washington meeting, and opinions varied as to the etiology of the disease, those not having studied cases either clinically, or by sections and cultures, being skeptical as to the relations of the yeast, which is so uniformly found in the cases so far studied. As to the literature, a summary may be found in the last edition of Dr. Hyde's treatise on Diseases of the Skin. Dr. Senn devotes a chapter of some fourteen pages, with illustrations of the histo-pathologic sections and of the yeast plant, in the recent edition of his Principles of Surgery. The report of Dr. Gilchrist, Johns Hopkins University, to whom we are indebted for the name blastomycetic dermatitis, is of the highest interest, as it constitutes the primary monograph on the disease in this country.

Aside from the Chicago cases, 3 are now reported from Indianapolis: the case of Dr. Robert Hessler;[1] my first case,[2] exhibited at the Atlantic City meeting by photographs, microscopic sections and cultures of the yeast plant, and I now am able to present the details of another case, with some notes on the immediate diagnosis. Dr. Dyer[3] reports a case from New Orleans, and Dr. F. J. Shepherd, before the recent meeting of the American Dermatological Association in Chicago, reported a case which was cured by iodin.

The papers read at the Washington meeting, taken in connection with the discussions which followed, represent fairly the opinions of our dermatologists as to the natural history, the clinical appearance, the micropathology and the parasitic etiology of this disease. We have first to consider whether the score or more of cases cited, over half of which have occurred in Chicago, really warrant the presentation of a new dermatosis to the profession. And second, are the cases so far described tuberculosis of the skin? Finally the inquiry as to whether the cases, or some of them at least, are not complicated with syphilis, has been considered.

In the discussion of the subject at Washington, Drs. J. C. White and J. T. Bowen, both of Boston, and Drs. W. A. Pusey and Joseph Zeisler, both of Chicago, were inclined to regard the case as tuberculosis of the skin, the blastomycetic element being only a secondary complication. Dr. Bowen and Dr. Zeisler contended that the clinical evidence of the pure cultures of the organism being capable of producing by inoculation a similar disease in animals, is not yet sufficiently established.

Dr. J. C. Johnson was inclined to agree with Drs. Bowen and Zeisler, because of the unusual picture of exudative inflammation with pus, existing side by side with productive tubercles, presented by blastomycetic dermatitis. He further believed that the failure of inoculation to produce a condition which we could recognize as blastomycetic dermatitis, according to Koch's laws, does not prove anything. "We cannot," said Dr. Johnson, " by any known means, no matter what form of bacillus we use, produce at will any type of cutaneous tuberculosis with which we are familiar." He also said

1. Ind. Med. Jour., August, 1898.
2. Ibid., April, 1900.
3. Jour. Cutan. and Venereal Dis., January, 1901.

that Dr. Wm. H. Welch had recently stated to him that he had no doubt as to the pathogenicity of the blastomyces, and in deference to Dr. Welch's authority, he desired to withdraw any objection he may have made to the causal relationship of the fungus to blastomycetic dermatitis.

That the disease is a pathologic entity was earnestly contended by Dr. Gilchrist. He asserted that the organism is present in every case, that pure cultures have been obtained from the majority of cases, and that similar pathologic processes have been reproduced in animals. The clinical features of all the cases described are fairly constant, and it seems decidedly proven that the disease, whether considered from a clinical, pathologic or bacteriologic standpoint, stands apart from other diseases of the skin. In no one of the Chicago cases is the disease to be regarded as syphilis with blastomycosis implanted on it, as there was absence of syphilitic history, and the histologic picture was not that of syphilis, but of blastomycetic dermatitis. Dr. Gilchrist also quotes the observation of Dr. Hyde and others, that potassium iodid exerts a curative action in the disease.

In view of all the recorded studies of the known cases, made by Drs. Gilchrist, Hyde, Hektoen, Montgomery and others, we are perfectly justified in regarding this disease as an entity, and, while it is possible that it may occur on the skin of patients suffering from either syphilis or tuberculosis, there is no reason for regarding it as any one of the protean manifestations of either of these diseases. Recognizing the disease, then, as an entity and using the name given by Dr. Gilchrist of blastomycetic dermatitis, some observations on its immediate diagnosis will be presented.

In any given case of ulcerative lesions of the skin we have in mind the possibility of its being syphilitic, tubercular, epitheliomatous or blastomycetic. Tertiary syphilitic ulcerations, subsequent to the breaking down of gummata, may resemble blastomycetic disease of the skin. But here we may rely upon the clinical history, the presence of other lesions in the body and the general hyperplasia of the lymphatic glands. We may also resort to the therapeutic differentiation by the use of the iodids; however, these are thought by Hyde, Shepherd and others to inhibit the growth of the blastomyces.

The affections most likely to be mistaken for blastomycosis are tuberculosis and epithelioma. In tuberculosis of the skin, represented by the lupus of the early writers before the etiology of tuberculosis was known, we have a more penetrating disease, invading tissues irrespective of their anatomic structure, and rarely starting from multiple foci. Lupus, moreover, is a disease of childhood almost exclusively, though persisting into mature life. It is to be remembered, however, that the case primarily referred to Dr. Gilchrist and studied so extensively by him, was regarded by Dr. Duhring as a "typical chronic scrofuloderma verrucosa," and that the first case described by Dr. Montgomery had been seen by Dr. Pusey, Chicago, several years before, and photographed with the label "tuberculosis verrucosa cutis."

Finally as to epithelioma, the sections of my first case of blastomycetic dermatitis—No. 10 of Dr. Hyde's list—were mistaken by casual observers for ordinary epithelioma of the skin. Cancer of the skin is a lesion rarely seen before the age of 40, and indeed the greater number of cases occur more nearly at 50. Of the 17 cases of blastomycosis tabulated by Dr. Hyde, 8 are under 40 years of age; my 1st case was 50, and my 2d, 27. The age limit of cancer is an important point in diagnosis, lupus being a disease of childhood. Cancer of the skin usually occurs after 40, while syphilis and probably blastomycosis may be found at any age, as in other diseases due to direct contact with the virus producing them.

Again, epithelioma has its points of anatomic predilection to an extent not at all characteristic of blastomycetic disease, as is shown by a mere glance down Dr. Hyde's column of the regions invaded. Cancer of the skin begins at some common center and in its course invades the tissues met, regardless of their structure and function, and mercilessly following the lymphatic channels wherever they lead. Cancer usually is represented by a single primary ulcer with a regular indurated base and margins not at all characteristic of blastomycosis. The glandular involvement as a rule is absent in the yeast-caused growth, while in cancer sooner or later the glands are involved in the process. Blastomycetic disease is primarily a disease of the skin—a dermatitis slowly creeping and destroying, healing and scarring over, as the process extends. Dr. Hyde's column showing the duration of the disease, includes cases of 4, 5, 7, 11 and 20 years' progress, limited, perhaps, as was the Wells-Senn case, for ten years or more to the back of a single hand.

Thus far, no two cases of blastomycosis have occurred in the same family; there is no history of hereditary tendency as is frequent with epithelioma. As far as we know neither epithelioma nor blastomycosis has been transferred from one member of a family to another, although blastomycosis is evidently distinctly auto-inoculable, as is shown in the history of my second case.

These general considerations of syphilis, tuberculosis epithelioma and blastomycosis are certainly of value in the clinical and immediate diagnosis. But there is yet another feature of blastomycosis upon which we may be justified in laying stress, and that is the persistent pain of progressive blastomycosis, unlike any of the discomfort attending the other ulcerous lesions which resemble it in general appearance. The edges of these ragged and irregular ulcers are in a constant state of inflammation, extending perhaps from one-fourth to one-half an inch into the skin not yet breaking down. The symptoms are heat, redness, swelling and pain—a gnawing, burning and persistent pain, intensified at night, preventing sleep, leading to the use of opiates, and only relieved by the destruction of the invaded margins with caustic, or the actual cautery, or by the knife. The knife, the hot iron, the application of carbolic acid followed by the concentrated acid nitrate of mercury, gives immediate relief, or at least as soon as the pain of the burning has been subdued by appropriate dressings. Let the process be incomplete, however, as occurred several times in case number 11 of Dr. Hyde's list while under the care of various physicians during the eighteen months' progress of the disease, and, with the further growth of the organism on one side or the other of the primary lesion, the intolerable pain again begins and the patient is willing to submit to a repetition of the destructive process, even begging to have the affected member amputated.

I know of no observer who has been so fortunate as to see the lesions of blastomycetic dermatitis early in their growth. From the history given by the patients and from the study of cases presenting a series of lesions in various stages of growth, the following conclusions

are tenable and are illustrated in my second case. If, on any part of the body, notably the exposed parts, as the hands, face and feet, a portion of the skin presents pustules followed by small crater-like ulcers which coalesce causing progressive destruction of the skin, blastomycosis may be suspected. At first the patient thinks the lesions are small boils, and resorts to poultices. Upon consulting the physician, the lesions are mistaken for boils, possibly for lupus, or syphilis, or epithelioma, and appropriate treatment given according to the diagnosis. If regarded as lupus or cancer, the physician may cauterize the lesions with the actual or the chemical cautery, and no doubt in the past many cases have been cured in this way, for the disease can in no sense be regarded as new to the human species, and indeed, is probably as old as cancer, lupus or syphilis.

Whether or not the patient has lived in a region where the conditions for yeast growth are favorable, that is, in low moist countries or localities where the ordinary yeasts of commerce are abundant, would seem to have no weight in diagnosis, but the failure to find cases in our coast cities, notably in Boston and New York, and the abnormal number of cases observed in Chicago, would seem to favor the suggestion of Drs. Hyde and Fordyce that the fungus has a local distribution. Those affected, as shown by Dr. Hyde's list, are people in contact with the soil and its products; they are laborers, carpenters, etc. But again, these people constitute the larger part of the population, and so the occupation has little or no significance. Whether the infection takes place through the unbroken skin is not settled, but certainly, as in common pustular acne, the primary infection may be by way of the sebaceous ducts. The organism by its toxins, incites a folliculitis with obstruction of the outlet of the gland and penetration of the gland sac. Therefore the occurrence of multiple acneoid pustules in close proximity to each other occurring in unusual localities, unsymmetrically distributed and followed by necrosis and punctiform excavated ulcers, should call attention to the probability of blastomycosis.

Dr. Wm. T. S. Dodds, Indianapolis, who has kindly taken charge of the microscopic work and bacterio-pathologic studies upon the cases falling under my observation, has made the following notes in regard to the microscopic diagnosis, which are here appended.

In the immediate diagnosis of blastomycetic dermatitis, the microscope is one of our greatest aids. The recognition of the yeast cells in the tissues is as easy as the demonstration of the tinea in the epithelial scales and hair, and can be performed in about the same length of time.

A bit of tissue taken from the advancing margins, is macerated in a 20 to 30 per cent. potassium hydrate solution for five to ten minutes, or until the blood cells and extraneous bacteria are destroyed. The pus taken from a small abscess and treated in a like manner will answer the same purpose. It is well, in order to avoid confusing oil droplets with the yeast plant, to first wash the tissue in ether for a short time; this, however, is unnecessary in experienced hands, because the yeast cell is very easily differentiated. The potash solution has no action upon the yeast cells and they stand out in the macerated material as doubly contoured highly refractory bodies from 5 to 20 microns in diameter. They are almost always in the budding stage and it is not uncommon to find several organisms in the same field. The concise method used in our laboratory for the demonstration of the yeast plant in the tissue is as follows:

1. Secure a small bit of tissue from the advancing margins.

2. Place this tissue upon a glass slide and wash in ether, 2 to 5 minutes.

3. Macerate in the potash solution, using a cover slip to assist in dissolving the tissue, 5 to 10 minutes.

4. Examine the specimen under the microscope, using a 1/6 to 1/12 objective.

This method will be found convenient, sufficient and conclusive. It can be used at the time of operation and will determine the amount of tissue which should be removed.

The cultivation in pure culture of the yeast from the diseased tissue is easily performed, if care is exercised in obtaining the planting. Pure cultures are often obtained in the first tube inoculated. Beer-wort gelatin makes the best medium for work of this kind. The colonies are easily recognized because of their large size, white fluffy appearance and clean-cut margins. Cultures can be obtained directly from the tissue upon Loeffler's blood serum tubes, such as are used in the bacteriologic work for diphtheria.

NOTE.—Since the above was written the author has observed another case referred for diagnosis, August 1, by Dr. H. R. Lowder, of Bloomfield, Ind. The growth was the size of the palm, on the skin of a man of 60. It had begun as a folliculitis two years before. The lesion was proliferative, consisting of papillary masses the size of match sticks ⅛ to ¼ inch long, matted together and flattened by continuous bandaging. The appearance was that of Dr. P. A. Morrow's case of tuberculosis papillomatosa cutis reported in the *Jour. Cut. and Venereal Diseases*, of October and December, 1888. The case was seen by Drs. F. B. Wynn and N. E. Jobes. The yeast plant was at once isolated by Dr. Dodds, not only from several parts of the lesion but from follicles resembling acne one-half inch from the growth—a finding of very considerable interest. We have sections of the growth and the pure cultures of the yeast. At the margin was an elevated, inflamed and very painful border. No central scar tissue was present. Syphilis and epithelioma were excluded.

SUDDEN AND TEMPORARY MENTAL ABERRATION—UNCONSCIOUS AUTOMATISM—TEMPORARY IRRESPONSIBLE STATES.

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The problems in psychology are numerous and fascinating, and many are yet unsolved. A man may be able to carry on a considerable conversation to-day, during which he betrays only slight peculiarities, perhaps only some exaggeration in speech; or, unless he is watched closely, he may not appear out of the ordinary; to-morrow he declares he has no recollection of the conversation. But what a loophole this hiatus may offer to one dissatisfied with his contract, or to one on the wrong side of the market who wishes to repudiate the order to his broker of the previous day, or to the one who wants to curse or annihilate his enemy!

It is a fact, though, that there are certain individuals who at times perform certain automatic acts, or say certain things, or are seized with sudden delusions or hallucinations, who, after a period of a few minutes, or a few hours, or a few days, suddenly recover their usual cerebration, seem quite natural in all respects, and have no recollection whatever of these acts, though they may recall the delusions or hallucinations as one remembers a dream in the waking state.

The numerous instances recorded in the newspapers of the sudden and unaccountable disappearance of individuals, and their subsequent discovery at distant parts of the country, wholly unable to explain such transition, are by no means all fictitious. Many of these are too well authenticated to be doubted. Some are perhaps in

that state known as double consciousness. Others may be in the epileptic psychical equivalent, while others may perhaps become suddenly insane from injuries to the head or from other causes. The cases I shall relate do not include those of prolonged suspension of normal consciousness, which have so mystified the laity, but are those as the title describes, of sudden and temporary mental aberration especially characterized by the performance of unconscious automatic acts.

The great interest attaching to these cases, and the importance of their recognition, are especially twofold: First, such individuals are liable to commit serious crimes, such as murder, arson or other felonies, while in this morbid condition, and to be totally unconscious of and wholly irresponsible for such crimes. Secondly, these morbid states should be so thoroughly studied that the deliberate criminal could not succeed in urging them as a cloak for his crime, and thus escape just punishment by law.

One of the cases I have to describe is an epileptic, who, in the psychical equivalent for a period of three days, suddenly left his work, traveled several miles, procured a revolver, shot himself in the left chest, was immediately taken to a hospital, and did not recover his usual mental state for two days later, being absolutely unaware during this time of what he had done, or what he had suffered.

The other is that of a man about 35 years of age, under treatment for a neurasthenic condition, resulting from alcoholism and syphilis. This man during the course of treatment disobeyed orders, and began drinking liquor one afternoon at 1 o'clock, and after 4 o'clock did not recall a thing he had done until the following morning. From the statements of his wife, though, it appeared that he went home that evening about 5 o'clock, left two evening papers upon the bed, walked out of the house and presumably down town. He probably continued drinking in the evening, lost his watch and money, and returned home about 12 o'clock the same night and threatened his wife, but did not seriously abuse her. He went to bed soon after, and awoke, as previously stated, rational in the morning. To a casual observer he would not have been recognized as being intoxicated.

The third case was that of a man who, after severe muscular exertion and physical strain resulting from a footrace, developed a delusion that at the close of the race there was a runner still ahead of him, though he had outdistanced all competitors and won the race. At this time and immediately after the race he had severe pain on the top of his head, with a high pulse. This man would at times subsequently have perfectly lucid intervals of variable duration, and would as suddenly, especially toward the evening, become irrational and threaten to kill his wife. The passing from the lucid to the irrational period was instantaneous and vice versa, and during my examination I watched him closely lest he would have one of his lapses, for he was not to be trusted in such condition. I might add there was no litigation involved in any of these cases.

CASE 1.—March 18, 1899. Mr. T. B., age 30, was married ten years, three children. Brass worker, and previous to that, worked at steam and electricity. No history of head injury. Father's health good. Mother living at 59 and in good health. Has two half-brothers in good health. Habits have always been temperate in regard to liquor; used tobacco rather freely.

General health was good up to 22½ years of age, about eight years ago. At that time he began to have attacks of the following character. While sitting talking in the room he would get up and walk across the room, and move or turn a chair upside down, or do some such ridiculous thing, and would return and sit down again. Says he was conscious of what he was doing at the time, but not able to prevent it. These peculiar acts would occur about once or twice daily. At this time he was a general utility man in the machine shop. Automatic acts of this character continued for about one year, then became more frequent. At one time he picked the baby up to take it downstairs to its mother, when a spell came on and he dropped the baby on the stairs. He was entirely unconscious of this act until two months after when his wife told him of it. At another time, a week later, during an attack, he dropped the baby on the floor. For two years past he has occasionally gotten up at night in an attack, dressed himself, and then returned to bed with his clothes on. At another time he suddenly struck a friend with whom he went to a picnic. One night he went over to the bed of his children and jumped on the bed and also assaulted violently his wife. The neighbors came in and took him for safety to the lock-up.

In June, 1898, he was working near Pittsburg in a machine shop. On Friday, at 3 p. m., while working at his machine, he reached up and stopped it, took his hat and coat and went to the depot. There he took a train for Allegheny, a distance of 15 miles, wandered around, possibly in the park, though he does not remember about this; shot himself through the left chest, just above the heart, the bullet passing entirely through the body.

He was removed to the Allegheny General Hospital. He he was not conscious of what had occurred until the following Sunday. The lapse of consciousness began at 3 p. m. on Friday, and continued up to some time on Sunday. After recovering from the effects of the gunshot wound, he began to have more pronounced attacks in which he would fall down and lose consciousness. These attacks seemed not to be convulsive. The attacks after this were nearly all nocturnal and regularly epileptic in character. He returned to work and continued up to Sept. 15, 1898. His condition became so dangerous they thought it wise to remove him from home to protect his family. He went voluntarily to the Allegheny County Home on September 15. Here he remained for some months and was then transferred to the Dixmont Insane Asylum, where he had numerous ordinary epileptic attacks, but rarely a psychical equivalent, as I have subsequently learned from Dr. Walker, the resident physician.

CASE 2.—December 9, 1898. Mr. V., 31 years of age, married one year, was in lumber business; confined to office. Former weight was 190 lbs.; present weight, 165 lbs. He was in good health up to three or four years ago, when he drank to excess. Mother's side of family was neurotic. There was a specific history.

Present trouble began three or four years ago. He is very nervous; stomach disordered; sleeps quite well. When he stops drinking for a while head feels thick and dull. Bowels are not very regular. He uses tobacco freely; drinks one cup of tea at meals. Knee-jerk is about normal. Pupils react to light and in accommodation. He has vertigo at times.

Feb. 27, 1899. Called to-day to resume treatment. He has not been so well lately on account of drinking. Three days ago he began drinking whisky freely toward the middle of the day, and by 3 p. m. was thoroughly under the influence, though not staggering drunk. He could walk about quite easily, and thinks from his gait no one could have told that he was under the influence of liquor. At 4 or 5 p. m. he was totally unconscious of what he was doing. He went home, left two newspapers in the upstairs room, and went out of the house and down town again, and never knew that he had been at home. He had no clear recollection after that of what he did for some hours, though he indistinctly recalls the fact that he inquired of a stranger what car to take home at night. He says he went spreeing around town, but does not remember where he lost his money and watch. He went home about 12:30 or 1 at night and was inclined to threaten and abuse his wife. He went to bed, and after sleeping until next morning awoke perfectly conscious. Then he learned from his wife of his abusive treatment of her, but he had no recollections of what had

transpired in the interval except as mentioned above, the street-car incident.

CASE 3.—July 27, 1898. Mr. M. J. W., age 27, was married nine months. He was a policeman formerly; surveyor at present. Previous health was good. He used liquor to excess up to two years ago, and never used tobacco up to present trouble, and not to excess the last few months; not much tea nor coffee. He had no head injury. In August, 1897, he ran three foot races, the first a mile, the second two and a half miles, and the third three and a fourth miles, and won all of them. At end of last race he was exhausted, and after passing all contestants, still imagined one racer was ahead of him. After race he had slight headache, and pulse 140. Next day he had severe ache over the top of head, and headache irregularly for some time. During fall of last year, about October, he imagined colored people were behind him and would look back suspiciously, no one was really around. He always slept well. About four months ago he fancied some one was too attentive to his wife and he threatened to do them injury. Is quite suspicious. These delusions come suddenly and leave suddenly; in evening more pronounced. He has had some weakness in knees. Knee-jerks are a little exaggerated. Attacks recur about every twenty-four hours, usually in the evenings, and may last an hour or more.

These cases are of some interest from the point of view above stated, and call attention again to the possibility of homicides by persons in irresponsible mental condition. The unique features of the first case lie in the fact that the attempted murder was that of self instead of another, and is without parallel as far as I have been able to learn. It calls up the question as to whether some suicides may not be committed in the psychic equivalent—a very strong inference were the suicide an epileptic.

It should be the duty of all physicians called to testify in murder cases where the mental condition is in question, to inquire most carefully as to the presence of any epileptic tendencies or the occurrence of epileptic attacks; and it should be remembered that the psychic equivalent, as in this case, may precede the ordinary convulsive attack; so that some criminal attacks may be the first evidence of any abnormality in the individual, to be followed later by more convincing proof of the epileptic state. Then again, as pointed out, the malingerer who might attempt to feign this condition should be detected from the history of his case and from a careful examination, if possible, during the simulated seizure. It would certainly be very difficult to uncover the impostor in a feigned psychic equivalent, as the part to be acted requires no particular skill or cunning.

The occurrence of sudden mental aberration in cases like No. 3 is also, I believe, quite uncommon. This result was probably ascribable to the extreme nerve exhaustion or to an alterated cerebral circulation, probably congestive, as evidenced by the severe pain on the top of the head. Had this man, on the night after the races, killed his wife, as he was liable to do from some delusion, it would have been a very difficult task at the trial to demonstrate his irresponsibility, owing to the suddenness of the attack. This case should be remembered as an example, rare though it may prove, that great physical strain may be sufficient to temporarily derange the mind.

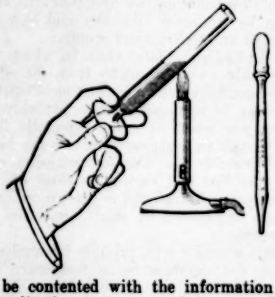
The alcoholic case, No. 2, though by no means exceptional, reminds us that while a state of alcoholic or drug intoxication does not serve as an excuse for crime, it may be held to extenuate the act. Had this man murdered his wife when he returned home in the evening or at 12 o'clock at night, it would have been done not only without premeditation, but without consciousness perhaps of the act, as he did not know that he had been at home either during the afternoon or late at night. Normal consciousness seems to have been entirely suspended for a time, during which he was in a state of alcoholic delirium or automatism, without the characteristic alcoholic ataxia. But this is not very uncommon. Some men drink lightly or heavily and at once pass into a state of frenzy or fury, during which they have no recollection of the acts performed at such time.

RAPID SUGAR TESTING WITH HAINES' AND PURDY'S SOLUTIONS.

WILLIAM H. GERMAN, M.D.
CHICAGO.

A search for sugar and its quantitative estimation are necessary in all routine work of urine examination. The well-known Haines' solution for qualitative testing is so simple and trustworthy as to leave nothing to be desired. One dram of the solution is boiled in a test tube, six to eight drops of urine is added, and the boiling continued. If a bright yellow or red precipitate is obtained, sugar is present. With slight practice, one to two minutes is sufficient to in this way gain decided qualitative data.

The methods in use for quantitative estimation of sugar are generally too slow and cumbersome to be of value to the busy practitioner of medicine. He has



either to be contented with the information obtained from a qualitative test, or send to some laboratory where a specialty is made of urine examinations. A method devised by my assistant, Mr. Carl Irenæus, eliminates the tediousness of the standard methods, and gives rapid and accurate results. The only apparatus required is that shown in the accompanying illustration, viz., a graduated test tube and pipette, and a Bunsen burner or spirit lamp.

When the presence of sugar in the urine has been determined, as by the Haines' test, fill the test tube to the 12 c.c. mark with Purdy's solution, and the pipette to the zero mark with the urine to be tested. Heat the test solution to boiling, and add the urine drop by drop in the test tube, boiling for a few seconds after the addition of each drop, until the blue color has entirely disappeared, trying to decolorize with the smallest possible quantity of urine. If less than 0.2 c.c. of the urine is required to decolorize the test, the urine contains above 4 per cent. of sugar, and should be diluted with an equal volume of water, and the results obtained multiplied by two. The subjoined table gives all ratios of reduction from one-half of 1 per cent. up to 4 per cent., calculated to each quarter per cent., with corresponding grains per ounce.

After slight experience with this method, the time required to make a complete qualitative and quantitative test need not exceed five minutes. This method has been carefully compared with the standard methods of sugar testing, and results have been found fully equal to those obtained by the standard methods. It was used for years by Mr. Irenæus in the laboratory of the late Dr. Charles W. Purdy in all cases where rapid results were required.

Cubic cm. Urine.		Per cent. Sugar.		Gr. per oz.	
.2	.4	4	2	19.2	9.6
.225	.5	3.75	1.75	18	8.4
.25	.6	3.5	1.5	16.8	7.2
.275	.7	3.25	1.25	15.6	5
.3	.8	3	1	14.4	4.8
.325	1.2	2.75	.75	13.2	3.6
.35	1.6	2.5	.5	12	2.4
.375		2.25		10.8	

103 State Street.

TRAUMATIC ARTERIO-VENOUS ANEURYSMS OF THE SUBCLAVIAN VESSELS.

WITH AN ANALYTICAL STUDY OF FIFTEEN REPORTED CASES, INCLUDING ONE OPERATED UPON.

RUDOLPH MATAS, M.D.
NEW ORLEANS.

(Concluded from page 247.)

PRACTICAL CONCLUSIONS.

As a result of the study of the arterio-venous aneurysms of the subclavian vessels which we have summarized in this contribution, we find that this class of injuries can be separated clinically and surgically into three distinct and well-defined groups:

1. The immediately fatal cases in which death follows so quickly after the injury from the effect of the primary hemorrhage and shock that no effective surgical assistance can be rendered. These probably constitute the largest proportion of cases, especially in military practice, though an exact estimate can not be obtained. It is also probable that the vast majority of injuries involving the first and second divisions are fatal primarily, and are to be included in this group, except when the injuries are caused by small projectiles or sharp-pointed weapons.

2. In this second group, primary hemorrhage may be very great, but spontaneous or temporary hemostasis occurs in the syncopal state, which favors the formation of a provisional thrombus. In this class of cases two events may occur which will profoundly modify the prognosis. In the one case (*a*) secondary bleeding will set in within a few hours or, more often, days—usually within the first week—with disastrous consequences, unless the patient is rescued by prompt operation or other form of intervention. The other alternative (*b*) justifies the formation of the following group.

3. In this group the primary hemorrhage may also be excessive, but, as a rule, is moderate and is readily controlled by pressure, or may be spontaneously arrested as in the second group. More often there is no syncope, because the external hemorrhage is slight. There may be a large hematoma. No secondary hemorrhage occurs, the wound heals up, leaving a well-defined and permanent arterio-venous aneurysm.

The arterio-venous circuit is usually promptly established by direct inosculation between the artery and vein (aneurysmal varix), or by means of an intermediary sac (varicose aneurysm), the fistulous communication between the vessels acting in both cases as a safety-valve by which the dangers of further extravasation are to a large extent permanently avoided.

Rötter, in his paper published in 1893, analyzes 13 cases of stab wound of the subclavian vessels, 5 of which were arterio-venous, including the one which he reports, in which he operated for secondary hemorrhage following an injury to both vessels.

He found that in 6 cases the hemorrhage was spontaneously arrested, and no secondary hemorrhage occurred; but in all of these, secondary traumatic aneurysm developed, which impaired the usefulness of the arm, either partially or completely, and led to grave secondary complications which subsequently imperiled life.

In seven cases, the larger number, repeated secondary hemorrhage occurred, and the result was far more serious, for all these patients except Rötter's—an arterio-venous injury—died, and this one was saved only by prompt and desperate operation undertaken at midnight. As a result of this inquiry, Rötter advocates immediate operation—*i. e.*, ligation of the injured vessels at the bleeding point as quickly as possible after the patient has recovered from primary shock and hemorrhage, without waiting for the appearance of the secondary hemorrhage which might prove fatal. The only objection to Rötter's recommendation is that it is based upon the study of mixed cases of simple arterial and arterio-venous injuries, and not sufficient stress is laid upon the more favorable tendency displayed by the arterio-venous injury when these show an early disposition to form aneurysmal varices.

The relative benignity of arterio-venous aneurysms when fully developed—*i. e.*, when the communication between the artery and the vein has become distinctly and permanently established—has led, as Poinsot correctly remarked in 1882, to the general acceptance of a fallacious doctrine that in wounds of a single vessel, such as the subclavian artery, the simultaneous lesion of the satellite vein was a safeguard to the life of a patient.

For instance, Moore,[6] in commenting upon Larrey's case, said the patient's "life appears to have been saved by the singular circumstance that the vein was also pierced by the lance (saber), which wounded the artery. The blood from the latter vessel, when restrained from passing through the external wound, escaped into the vein, and was thus saved to the system until the wound healed." The explanation, says Poinsot, is as fantastic as the pretended benignity of the injury is contestable.

If the simultaneous lesion of the artery and vein is apparently less dangerous statistically than injury of the artery alone, this is due to the fact that in many immediately fatal cases the existence of the double injury is not recognized until after death or only in the cases in which the patient survives and the anastomosis has had time to form or an operation has been performed for repeated hemorrhage. Whatever the doubts entertained on the subject, the cases of Will, Rötter, and Veiel alone suffice to prove that the old teaching as to the relative benignity of double injuries is not to be trusted. One fact, however, must be admitted, as we have conclusively shown in our table, and that is that once the arterio-venous connections have been firmly established, these injuries, as a class, are less dangerous to life than the traumatic aneurysms involving the artery alone.

TREATMENT.

In dealing with these cases practically there are three questions that now present themselves for discussion or consideration: 1. What is the best treatment that can be applied to arrest the primary bleeding at the time of

6. Holmes' System of Surgery. Edit. 1804.

injury? 2. After the arrest of the primary hemorrhage, and the patient has rallied from the shock, and it is evident that one or both vessels have been injured, shall we proceed immediately to secure the bleeding point, or wait for future developments, hoping that the wound will heal, that no secondary bleeding will occur, and that if it is a double injury a permanent arterio-venous communication will be established? 3. After the existence of an arterio-venous aneurysm is fully established and the wound has apparently healed, shall we consider the patient out of danger and discharge him with this lesion in an active state, trusting to Nature's tolerance of this condition and to the remote possibility that it may be spontaneously cured?

We may now briefly summarize our conclusions on these three points seriatim: The treatment of arterio-venous injuries of the first division of the subclavian need scarcely be considered. The cases of survival after the immediate effects of such an injury must be rare indeed. Nevertheless, wounds inflicted by very small caliber bullets—Letenneur's case—or with narrow-pointed weapons may give rise to comparatively small hemorrhages which, being spontaneously arrested and circumscribed, will end in aneurysmal varices. It is quite possible that in future, cases of this kind in this locality may be more frequently recorded than in the past, especially since the introduction of hard, small-caliber projectiles in modern warfare. It is evident that in this division of the artery no operative treatment is permissible, the danger and magnitude of the intervention overshadow the possible danger of the lesion, which when reduced to the condition of a simple varix, is undoubtedly compatible with a long tolerance and survival.

In dealing with arterio-venous traumatisms of the second and third divisions of the subclavian the conditions are different. Here the vessels are comparatively accessible, and notwithstanding the grave and formidable character of the undertaking it is quite possible after the resection of the clavicle, as first suggested by Langenbeck, and practiced by Bergmann, Rötter, Halsted, the author, and others, to bring the vessels into view and to ligate them.

In dealing with the first condition—*i. e.*, a bleeding patient—it is evident that all attempts at radical operation on the spot can not be considered in ordinary circumstances. The first indication, then, is to arrest the bleeding, and this is best done by 1, digital compression over a compress or in the wound; 2, by packing the wound, if it is a penetrating cut, and holding the pack firmly wedged in the wound by suturing the edges of this over the pack; or, 3, by hermetically sealing the wound with a continuous stitch, as Rötter suggests. This procedure, followed by a firm compression bandage, will usually suffice to arrest the external bleeding until the patient is taken to a hospital or other convenient place, where a flat bag, filled with lead shot, and held over the injured area with an elastic bandage, will usually prevent any further primary — external — bleeding.

After the patient has rallied from hemorrhage and shock, then the question arises: Shall we operate and when? Shall we wait for a dangerous, if not fatal, secondary hemorrhage to occur, or prevent this by operation? On this point there are differences of opinion. No one will question the propriety of early intervention in cases of arterial injury with the formation of a large, increasing and *pulsating* hematoma. Here the general principles which have guided the surgeons in the past are applicable with still greater reason. The wounded vessels must be sought for at the bleeding point if possible. Bergmann's rule in reference to subclavian injuries, confirmed by Le Fort and Poinsot, and more recently emphasized by Rötter, in reference to arterio-venous injuries, has become an acknowledged law in this class of cases.

"The ligature of the artery should be performed as soon as the patient has recovered from shock; if possible on the day of the injury; and the vessel should be secured in the wound and tied above and below the injured point."—Rötter. While we recognize the great force of a surgical canon which is based upon sound reason and experience, it must be recognized, with Wedekind and other recent writers, that there are conditions which justify delay, more especially in those cases in which the subclavian wound implicates both vessels.

It must be recognized that even a reasonable suspicion or positive evidence of an injury to both vessels—artery and vein—is not sufficient to justify a suspension of the above stated rule of practice, but that the development of positive signs of an *established* arterio-venous anastomosis does justify delay when the patient can be kept under constant observation and intelligent supervision. But as the signs of arterio-venous anastomosis are often delayed, other criteria must be depended upon to decide the question of intervention or abstention. Of these modifying conditions, the following are probably the most important:

1. The quantity of blood lost in the primary hemorrhage whether profuse, moderate or small. 2. The extent of the subcutaneous hemafoma. 3. The fact that the hemorrhage was arrested with difficulty, or ceased spontaneously and completely, after syncope. 4. The tendency to recurrence of early intermediate hemorrhage, "warning hemorrhages," which are the invariable precursors of the more formidable and fatal secondary hemorrhages. 5. The development of positive signs of an established arterio-venous communication.

If the primary hemorrhage is profuse and obstinate; if it tends to recur with the restoration of the circulation after shock; if the hematoma is extensive and progressive, then there can be no hesitation as to the urgency of surgical action, whether the evidence points to a single or a double injury of the associated vessels.

If, on the other hand, the primary bleeding is moderate and is readily controlled by pressure, or ceases spontaneously and completely, and there is no extensive or progressive hematoma; if there is no tendency to bleeding upon the removal of the dressings, then delay—*i. e.*, armed expectation, is permissible. If, in addition to the favorable signs, there is an early development of the signs of an arterio-venous anastomosis, then a conservative attitude is more than ever justifiable, *provided*, always, that the patient can be kept under competent and skilled surgical supervision.—Wedekind.

As to the last point, it is evident that even under the most favorable conditions, and with the most skilful assistance, the ligation of a wounded subclavian is a formidable undertaking, always fraught with great danger, and demanding for its successful accomplishment all the resources of the technique and the cool judgment which come only with long training; and if these are wanting at the time, it is plain that expectancy and palliation, with pressure, rest and ice, is the only conservative course to pursue until the patient has rallied sufficiently to be transported to a place where the necessary conditions for a radical operation can be obtained.

Finally, if the patient survives the first hemorrhage and shock, and there is no recurrence of hemorrhage,

TABULATED STATEMENT OF SEVENTEEN RECORDED CASES OF ARTERIO-VENOUS ANEURYSMS

No.	Operator or reporter.	Sex and age.	Nature of injury.	Seat of injury.	Result.	Primary hemorrhage (syncope).	Secondary hemorrhage.	Associate or complicating injury.	Date of appearance of aneurysmal signs.
1	Larrey, D. J.[1] Paris.	M. 32	Saber.	Left supraclavicular, presumably 3d portion.	Recovery.	"Frightful hemorrhage" (syncope).	None.	Brachial plexus.	24 hours "Next day."
2	Sanson.[2] Paris.	M. 50	Gunshot.	Left supraclavicular.	Recovery.	?	None recorded	?	. . . . .
3	Bérard,[3] Paris.	M. adult.	Stab.	Right supraclavicular.	Recovery.	"Not very copious."	. . . . .	. . . . .	Few days.
4	Wattmann,[4] Vienna.	M. 22 (?) at injury.	Gunshot.	Upper arm and shoulder (subclavio-axillary.)	Died.	. . . . .	Post-operative 22 days after ligation.	. . . . .	31 years.
5	Wederstrandt, J. P. C.,[5] New Orleans.	M. adult.	Gunshot.	Right subclavian, 2d or 3d div.	Recovery.	"Violent."	None.	Internal jugular vein in addition to subclavian; brachial plexus.	. . . . .
6	Smith, R. W.[6] Dublin.	M. middle age.	Stab.	Left supraclavicular region (2d division).	Recovery.	"Profuse."	None.	. . . . .	3 weeks.
7	Fisher, G.[7] Göttingen.	M. 32	Stab.	Clavicular region.	Recovery.	. . . . .	None.	. . . . .	6th day.
8	Letenneur,[8] Nantes.	M. 15	Gunshot.	Right side of neck, probably involving 1st division subclavian.	Recovery.	Little.	None.	Suspected brachial plexus, jugular vein close to subclav. junction.	Noticed next day.
9	Will, J. C. O.[9] Glasgow.	M. adult.	Stab.	Left subclavian vessels, 3d division.	Died.	Profuse.	12th day. 13th " 19th " 20th "	Pleura opened and septic hemothorax.	12th day tumor found.
10	Kirsch, B.[10] Breslau.	M. 27	Gunshot.	Right supraclav. tumor in delto-pectoral groove near clavicle (3d div.).	Recovery.	. . . . .	None.	Possibly brach. plexus injured.	4th day.
11	Arango, A. P.[11] Medellin, Spain.	M. 27	Stab.	Posterior region of the shoulder (3d division).	Recovery.	"Abundant, controlled by patient's hand."	None.	. . . . .	8th day.
12	Von Rötter, G.[12] Berlin.	M. 28	Stab.	Left infra-clavicular (3d division).	Recovery.	Pouring in a stream (syncope).	9 days after injury (midnight).	Nerve (not definitely stated).	Discovered next day.
13	Wedekind, George,[13] Berlin.	M. 32	Stab.	Left subclavian below middle of clavicle (3d division).	Recovery.	Profuse, no syncope, easily controlled.	None.	None.	5 days.
14	Veiel,[14] Cannstadt.	M. 23	Stab.	Right infra-clavicular (3d division).	Recovery.	Profuse.	3 days after injury (midnight).	None.	Noticed on 9th day.
15	Matas, R.[15] New Orleans.	M. 24	Revolver, 38-caliber.	2d division of subclavian through the anterior scalene.	Recovery.	Large hematoma, external hemorrhage moderate, no syncope.	None.	Brachial plexus; paralysis of arm.	4 hours after injury.
16	Vallas,[16] Lyons, 1900.	M. 25	Fracture of clavicle (indirect).	Supra-clavicular 2d and 1st division (right side).	Death.	Hematoma formed immediately.	None.	Internal jugular vein with subclavian vessels.	10th day recognized.
17	Reboul,[17] Montpellier, France, 1894.	M. 30	Fracture of left clavicle (indirect).	Aneurysmal hematoma enormous, filling supra-clavicular region and whole left side of back and chest.	Death.	Aneurysmal tumor probably began 9 days after injury.	None.	Tuberculosis of lungs and of peritoneum; marked cachexia and marasmus.	8th day after injury; aneurysm positively developed 35 days after injury.

1. Cliniques Chir., Paris, 1829, T. iii, p. 115.
2. Reported by Robert in Thèse de Concours, Paris, 1842 (Des Anevrismes de la region Busclaviculaire).
3. Bull. de Soc. de Chir. de Paris, 1865, 2 v. 1866, p. 367 et seq. Quoted by Richet in discussion of Letenneur's case.
4. Abstracted from Bericht über die Deutsch Natur und aerst. 21 meeting, 1843, Gratz, 1845. Also reported by Rokitansky, Ueber die einige der wichtigsten krankheiten der arterien, Wien, 1852.
5. New Orleans Medical News and Hospital Gazette, 1854-55, vol. i, pp. 393-395.
6. Proceedings Pathological Society, Dublin, 1860-61, vol. i, part 3, p. 158.
7. In mittheilungen aus der chir. Klinik. Göttingen, 1861 (quoted in Bramann's table—Das arteriell-venöse aneurysma). Archiv f. klin. Chirurg., Langenbeck, Berlin, 1886, vol. xxxiii, p. 12.
8. Bull. Soc. de Chir. de Paris, 1865, second series, 1866, p. 367.
9. Glasgow Medical Journal, Glasgow, 1875, vol. vii, p. 173.
10. Ueber traumat. aneurysm. Breslau, 1875. Thesis quoted by Bramann in "Das arteriell-venöse aneurysma." Archiv f. klin. Chirurg., von Langenbeck, Berlin, 1886, vol. xxxiii, p. 12.

and the wound heals, with the formation of a simple aneurysmal varix, what is the proper course to pursue? On this phase of the subject it may be safely asserted that the consensus of surgical opinion first formulated thirty-six years ago, when Letenneur's case was discussed at the Société de Chirurgie in 1867, has crystallized in definite form in favor of non-intervention.

The statistics which we furnish in this paper—the most complete list of the reported instances of this rare lesion which has thus far appeared—tend to confirm the arguments of the "let-well-enough-alone" policy, in so far as they demonstrate that in at least 11 of the 15 cases

OF THE SUBCLAVIAN VESSELS. GATHERED FROM THE LITERATURE (1827-1901).

Immediate effect of injury on arm.	Non-operative treatment.	Operation, if any; date and indication for operation.	Distant or remote effects of aneurysm on arm.	Remarks.
Arm icy, pulseless, colorless.	Pressure, ice, repeated venesection.	No operation.	Atrophy, paralysis of hand; permanent obliteration of pulse in all arm.	
. . . . .	. . . . .	No operation.	. . . . .	Persistence of aneurysmal signs for more than 10 years, for which patient consulted Sanson in 1832.
. . . . .	. . . . .	No operation.	. . . . .	Discharged "several" weeks later with persistence of aneurysmal signs, clamoring for operation, which Bérard and Dieffenbach refused.
None.	None for primary injury.	Double ligature third portion on 15th day for aggravation of pain and vascular disturbances.	After ligature arrested pulsation in arm; returned second day; infection ten days after, and secondary hemorrhage.	Immediate effects of primary injury not recorded; apparently insignificant; aneurysmal signs and tumor requiring ligature 31 years after primary injury; arterio-venous aneurysm confirmed by autopsy.
. . . . .	. . . . .	None.	Withered, paralyzed, cold; no sensation; pulse weaker and not synchronous with other side.	Died of diarrhea, 1854, 7 years after injury, and with persistent aneurysmal symptoms; arterio-venous aneurysm confirmed by autopsy.
Enlarged veins, diminished pulsation; arrest of circulation on elevation of arm.	None recorded.	None.	Arm cold, edematous, and pulseless; sloughing of little and ring fingers and inner side of dorsum and palm to ulnocarpal articulation.	About 7 months after injury sloughing of hand occurred spontaneously, slough detaching without constitutional symptoms; tumor at site of wound size of walnut; stationary.
. . . . .	Boyer's compressor without effect.	None.	. . . . .	Came under observation 1 year after accident, with active aneurysmal signs, and was discharged unimproved.
Notable swelling of arm, difficult deglutition.	Rest, diet, wet compresses (arnica), ice-bags.	None.	. . . . .	Wound healed and patient took his first promenade on 21st day; after this no history can be obtained.
. . . . .	Compresses perchlorid of iron and glycerin, pressure, opium, ice, rest.	Three weeks after injury operation attempted, but patient succumbed at first incision.	Pain in shoulder and elbow.	External wound had healed already when first secondary hemorrhage occurred. Autopsy revealed arterio-venous nature of injury.
Arm paralyzed, anesthesia of fingers, skin cyanosed.	Instrumental compression; not improved.	None.	Partial paralysis fourth and fifth fingers.	Came under observation 2½ months after injury and was discharged unimproved in any respect.
Swollen, cold, purple, pulseless, medius, ring, and little fingers paralyzed.	Compression; bandages to arm.	None.	Edema of arm; varicose veins of arm.	Ten years after operation patient was reported by friends in almost perfect health
Pulse weak and retarded, cyanosis, enlarged veins, etc.	Wound packed with iodoform gauze.	On 9th day (midnight) clavicle resected; artery ligated on outer side of scalenus, subclavian and other veins ligated; wound allowed to heal by granulation.	Arm cold and pulseless during operation; pulse did not return.	Discharged a few weeks after operation healed; resumed occupation as a stone-cutter; no gangrene or disability of extremity reported.
Pulse weaker.	Antiseptic dressings to wounds.	No operation.	Arm feels numb; tingles when allowed to hang.	7 mos. after injury all signs of aneurysm persist, but suffers no inconvenience, and follows regular occupation (locksmith).
After injury radial pulse retained.	Antiseptic dressings.	On 9th day artery ligated outside of scalenus; axillary artery ligated beyond wound; both axillary veins tied and venous branch from scapula ligated; clot turned out of sac and wound packed.	Immediately after operation arm white and cold; veins thrombosed, arm blue and hand swollen; sensibility impaired; thermic sense lost; arm diminished in size.	Last report 8½ months after injury; marked disability of arm and hand; trophic and vascular changes marked.
Pulse lost immediately, returned 5th day.	Gauze compress and adhesive plaster, ice-bags.	On 9th day, Sept. 13, 1900, subclavian ligated on both sides of scalene; lateral suture of vein; osteoplastic resection of clavicle, provisional traction loop around anomalous subclavian first portion; wound healed per primam.	Sloughing of thumb and little finger, part of hand and forearm.	Last report July 1, 1901; patient in robust health; right hand and forearm permanently disabled.
Arm motionless from fracture.	Gelatin injection, immobilization bandage.	Operation for suppuration in sac, Sept. 22, 1900; resection of clavicle; prophylactic ligature of subclavian artery impossible; free incision into sac; frightful hemorrhage controlled by 7 forceps left *in situ*; wound packed.	. . . . .	Death four hours after operation from surgical anemia and shock. Autopsy: non-union of fracture; internal jugular and subclavian veins torn by distal fragment, subclavian artery perforated also; scalenus anticus torn from attachments.
. . . . .	Bandage for fracture.	No operation attempted, patient too weak.	. . . . .	Death five days after admission to hospital while en route to his home; aneurysmal hematoma enormous, filled entire supraclavicular space front of chest and back, displacing scapula.

11. Bull. et Mém. Soc. de Chir., Paris, 1880, vol. vi, pp. 60 and 70, and An. de l'Acad. de Med. de Medellin. Medellin, Spain, 1892, xv, pp. 55-57. Abstracted from Spanish text, 1892.
12. Ueber die Stichverletzungen der Schlusselbeingefass, Berlin, klin. Wochenschrift, 1893, vol. xxx, pp. 278-284.
13. Deutsch Med. Wochen., Leipzig, 1895, vol. vii, p. 53.
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16. Reported by Gallois and Piollet, Rev. de Chirurg., Paris, July 10, 1901, No. 7, pp. 23-30.
17. Reported by T. Fabre. Thesis, Montpellier, 1894; and Gallois and Piollet, Rev. de Chirurg., July 10, 1901.

the patient survived the immediate effects of the injury and of the arterio-venous aneurysm that followed it for variable and often long periods of time. The study of these cases shows, however, that while the active persistence of the lesion is compatible with a long survival (ten years in two and as long as thirty-two years in one), they also show that in the vast majority—all but two—the lesion persisted in an active state in spite of sustained efforts to cure it; in many, the final outcome could not be ascertained, but in others disastrous consequences followed in consequence of disturbances of the circulation in the extremity. All this shows that arterio-venous aneurysms of the subclavians, like those of other large trunks, persist as pathologic conditions, which are only tolerated by the organism, and remain a vulnerable point in the vascular system, which may lead—even after years

of toleration—to disaster and death. These facts alone would justify a more aggressive attitude toward this form of vascular lesion on the part of surgeons were it not that the dangers of the operation required to eradicate it are not to be underrated, even with all the advantages of the modern technique.

In conclusion, while recognizing that a decision in this matter must rest largely with the personal equation and experience of the operator, we believe that in all fully-established arterio-venous aneurysms which are well tolerated and give rise to little disturbance—and are presented by patients who can be kept under periodical observation—the old rule of non-intervention is still in order and should be followed. On the other hand, we believe, with Delbet, that with the improved conditions of the present day the indications for interference have broadened, and that whenever the lesion is not well tolerated, and gives rise to serious circulatory or other disturbance, it is justifiable to operate with the view of extirpating the lesion, especially when situated in the more accessible third and second divisions of the artery.

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APPENDIX.

TWO ADDITIONAL CASES OF TRAUMATIC ARTERIO-VENOUS ANEURYSMS OF THE SUBCLAVIAN VESSELS, AND ONE OF INJURY OF BOTH VESSELS, NOT INCLUDED IN THE TEXT.

CASE I. *Arterio-venous aneurysm of the right subclavian artery and of the subclavian and internal jugular veins, caused by indirect fracture of the clavicle; operation; death.*—Operator, Dr. Vallas, Hôtel Dieu, Lyons. Reported by MM. Gallois and Piollet.[1]

A. F., aged 25; farmer; good antecedent history, but weak constitution; small stature and spare build; habitually pale. On July 2, 1900, while riding a mule the patient was suddenly thrown to the ground. He first fell on his feet, and then on his right shoulder. He felt an acute pain in the shoulder, but picked himself up and led the mule back to his stable. In doing this he had to walk up an inclined road by a hillside for twenty minutes. While on his way home he became conscious of the formation of a large swelling at the root of the neck on the right side. This swelling increased rapidly, and by the time he reached his house it had reached the ear and projected beyond it. As he walked he became short-winded, and when he arrived at the house he was completely exhausted. He could not stand on his feet, and had to go to bed at once. A physician who was summoned detected a fracture of the clavicle, with considerable subcutaneous emphysema. In the days that followed the swelling rapidly diminished, while a very considerable ecchymosis spread from the neck to the corresponding side of the chest.

When on the tenth day the bandages were removed a persistent but almost painless tumor had formed immediately above the clavicle and outside of the sternomastoid muscle. As this tumor remained the patient consulted other physicians at Grasse, who diagnosed an aneurysm of the subclavian artery, caused by fracture of the clavicle. On September 9—about sixty-two days after the accident—a gelatin serum injection, prepared by Lancereaux's method—was administered.

The patient was then advised to enter Professor Ollier's clinic at the Hôtel Dieu, Lyons, where he was admitted September 19. Condition on admission: The supraclavicular fossa is filled with a mass as large as a fist, which extends from the outer edge of the clavicular attachment of the sternomastoid to the outer third of the clavicle. The tumor is globular in shape, but irregular in contour. The upper outline of the tumor can be felt four fingers' breadth above the clavicle. It is most prominent about the level of the fracture, which is situated at the junction of the outer with the middle third of this bone. There is a complete failure of osseous union; the fragments are movable. The inner fragment projects under the skin anteriorly. The outer or acromial fragment is driven inward and backward, but appears to be outside the anterior scalene. The patient can scarcely move his arm, which hangs motionless by his chest. All the signs of aneurysm are recognizable in the tumor, except that there is no thrill. There is a distinct systolic murmur and expansile pulsation. Pulse, 100, can be distinctly felt at both wrists, though weaker on the right side. The right carotid can be outlined along the inner side of the sternomastoid. No pleural or pulmonary lesions. No apparent lesion of brachial plexus. A swelling still remains at the seat of the gelatin injection. On September 20 the patient complains of pain in the aneurysm. He has fever. Temperature, 38.8 C.; pulse, 108. The swelling, indicating seat of injection.

On September 21 the tumor increases rapidly in size; the overlying skin is red, edematous and inflamed. The seat of gelatin injection is also evidently inflamed and infected.

In the absence of Professor Ollier, Mr. Vallas takes charge of the case and diagnosticates "an inflamed aneurysmal hematoma, with threatened suppuration of the sac and general septic infection." It is decided that an operation is urgently indicated, and Mr. Vallas operates Sept. 22, 1900. Ether anesthesia. A horizontal incision is made parallel with and one finger's breadth above the clavicle; this is joined by a vertical incision following the inner edge of the sternomastoid down to the sternum. The insertion of the sternomastoid is divided and reflected upward together with the cutaneous flap. The omohyoid is divided in the middle, and each end is retracted. The sac is now exposed. In order to expose the subclavian, which is hidden by the tumor, the whole inner fragment from the line of fracture to the sterno-clavicular joint is disarticulated and excised.

Notwithstanding the great exposure of the field obtained by this procedure, it is still difficult to recognize and isolate the subclavian artery. The trunk of this vessel is hidden by the sac and the large trunk of the right innominate vein. At this juncture, while exploring for the artery with a grooved director, a discharge of about a tablespoonful of thick, reddish pus takes place, and the director penetrates into the cavity of the sac. At the same time a large clot appears and obliterates the opening made in the sac. In view of the difficulty of applying a prophylactic ligature upon the subclavian artery at its origin, M. Vallas decided to make a large free opening into the sac, with the view of securing the injured and bleeding vessels *in situ*. The instant this is

1. Revue de Chirurgie, Paris, July 10, 1901: 21me Année, pp. 23-30.

done a flood of mixed blood and clots deluges the field, the hemorrhage coming simultaneously from many points. In spite of a vigorous tamponade of the sac, the blood continues to flow. It appears to come most vigorously from the upper and inner angle of the wound. The cutaneous incision is quickly enlarged, and while the assistants are making vigorous compression at the bottom of the sac, the operator succeeds with much difficulty in placing two forceps on the internal jugular, one within and the other outside the sac. This stops the bleeding at this point. On removing the gauze packs the hemorrhage instantly recurs, pouring from several orifices. After great difficulties and much loss of blood, the bleeding is finally controlled by a series of forceps applied to the chief bleeding points.

In the meantime the patient grows very weak, and 500 grams of saline solution are injected and other restoratives are applied. The wound is packed with iodoform gauze, leaving seven clamps *in situ*. The patient is then put to bed, but in spite of the additional injection of 500 grams of saline solution death takes place four hours after the operation.

Autopsy.—A very oblique fracture of the clavicle is recognized, the sharp edge of the outer fragment projecting four centimeters beyond the line of fracture. The scalenus anticus is almost completely torn from its attachment to the first rib. The internal jugular vein is opened longitudinally by a tear two centimeters in length. The subclavian vein had been almost completely torn across, and its walls were incorporated in the sac.

The subclavian artery showed a small perforation which communicated with the sac. The tear in the artery had taken place a short distance from the thyroid axis. The internal jugular was also opened and freely communicated with the sac. The distal fragment had, therefore, been driven into the neck, tearing the scalenus anticus and penetrating the subclavian and internal jugular veins and the middle third of the subclavian artery.

CASE II. *Arterio-venous aneurysm—probably of the subclavian artery and vein—caused by indirect fracture of the clavicle; no operation; death.*—Service of D. Reboul, Montpellier, France. Originally reported by Th. Fabre,[2] and abstracted[3] from Gallois and Piollet's article, in the place quoted.

J. A., aged 30 years, locksmith, fell from a carriage March 4, 1894, and struck left shoulder. The clavicle was fractured at the junction of the outer and middle third. The fracture was set with immobilizing bandages. Eight days after the accident the patient removed the bandages and tried to use his arm. While moving the arm he felt a sharp pain at the seat of the fracture, which radiated to the dorsal surface of the forearm and hand. On March 31—nineteen days after this occurrence—another sharp pain was felt by the patient, and a tumor was noticed in the supraclavicular space on a level with the fracture. On April 8 the patient was seized with a violent cough, the swelling greatly increased in size, and became most painful. A traumatic aneurysm was then recognized by the attending physician. On April 10 he was seen by Dr. Reboul, who confirmed the diagnosis. All the signs of aneurysm existed, including a marked thrill and signs of venous disturbance. The tumor extends over the left thoracic region and covers an immense area. It extends five centimeters below the nipple, fills the axilla, and descends to the ninth rib; it projects posteriorly in the dorsal region, where it lifts the scapula and displaces it outward, and can be felt transversely, touching the vertebral column downward to the tenth rib. The entire supraclavicular space is filled by the pulsating hematoma, up to the posterior border of the scalenus. The veins are turgid and obstructed. The left arm is powerless. Marked trophic disturbances exist in the arm, showing lesion of the brachial plexus. The pulse in the left brachial and radial arteries is scarcely perceptible. In addition to this great vascular disturbance, the patient gives evidence of advanced pulmonary tuberculosis and of chronic peritonitis. In view of all these complicating and hopeless conditions, and the very bad state of the patient, which would not even justify the administration of an anesthetic, Dr. Reboul decides not to interfere. Five days after his admission to the hospital the relatives of the patient decided to take him to his village. He died *en route*, and no postmortem was held.

Gallois and Piollet, after a careful consideration of this case, believe that it should be classified as an arterio-venous aneurysm, as all the signs pointed to a lesion of both artery and vein. In Gallois and Piollet's very interesting contribution, ten observations are summarized from the literature, which illustrate the dangers of closed—simple—fractures of the clavicle from the standpoint of complicating lesions of the subclavian vessels. In only two of these ten cases were both vessels—artery and vein—implicated, and these are so rare and instructive that they are worthy of the special and full mention given them in connection with the subject of this paper.

CASE III. *Subclavian artery and vein tied under the clavicle for hemorrhage in abscess cavity.*—Operated on in the surgical clinic of Prof. J. A. Yefremowski. Reported by M. A. Vasilyeff.[4]

M. L., female, aged 20, entered clinic Nov. 21, 1884. Patient first felt pain caused by an abscess (?) two weeks previously. Tumor was found in right axilla, which increased until the 29th, when it occupied the subclavian and axillary regions. December 1, under chloroform; incision made by Vasilyeff in axillary line, much pus issued; finger inserted in abscess cavity ascended to middle of clavicle; wound enlarged and drainage inserted; great hemorrhage occurred, stopped by grasping bleeding-points *en masse* with hemostatic forceps and left in place. December 3, dressing changed. Much bleeding at night. December 4, pulse, 104; temperature, 38.6 C. Professor Yefremowski, under chloroform, enlarged wound, sought cause of hemorrhage; on removal of forceps, hemorrhage great and subclavian artery was then tied; hemorrhage stopped a while, then began again, and was venous; subclavian vein was then tied. Wound was disinfected, packed and bandaged; patient put to bed; hot bottles around arm. Profuse sweating at night. Pulse in left hand, 100; temperature, 39.3 C. December 6th to 20th, daily change of dressing. Temperature varied, 38 C. morning to 39 C. night and more. Pulse in radial artery of operated arm not found; edema of arm in spite of flannel bandage with pressure. December 14, ligature slipped from artery. Small abscesses in little finger and palm; opened and dressings changed on alternate days; wound healed by granulation; edema; tumor in region of external middle third of humerus; acute osteomyelitis of humerus; two counter openings made and drains inserted intero-externally. March 1, erysipelas in the arm and chest; wound healed the middle of the month. Wound healed; function of arm limited; right arm thinner than the left. Movement in shoulder and elbow-joints impossible. Massage, active and passive movements. Electricity.

June 16. Left hospital. Movement in shoulder-joint; almost re-established in elbow; in phalangeal, metacarpal joints flexor movements imperfect; no pulse in right radial artery.

2. Thèse Montpellier, 1894.
3. Revue de Chirurg., No. 7, July 10, 1901.
4. Chir. Vestnik, 1886, II, pp. 431-436.

Patient was seen in the fall of 1885; improvement; does hard work; no radial pulse; right arm thinner than left.

This case is properly not one of arterio-venous aneurysm of the subclavian vessels, but simply illustrates the dangers of hemorrhage and infection following a secondary ulceration of these vessels when exposed in a suppurating cavity. As this observation, originally published in a Russian journal, is difficult of access, it is here reproduced for the benefit of other students of the literature of the subject who may be interested in the nature of the case in consulting the bibliography.

The Organization of the Medical Profession.

(Continued from page 251.)

IV.

Transferable Record of Professional Standing Necessary.

A system by which information may be had of those legally entitled to practice medicine is sadly needed. The ignorance regarding the number of physicians in a county or state is a reflection on the business sagacity of our profession, to say the least. There is hardly a state in which it is possible to make more than a fair guess as to the number of physicians it contains, and he would be bold, indeed, who would assert that he knew within 10,000 how many physicians, legally entitled to practice, there are in the United States. This uncertainty as to numbers is an evidence of ignorance as to other important facts relative to the profession taken individually and collectively. The other day an advertising quack in one of the western states, a graduate of an "easy" medical school of Chicago, acknowledged paying $1000 for the questions of the Board of Examiners before which he had to pass an examination, or leave the city in which he had in a short time secured a paying practice by the aid of a large amount of printer's ink. This crime would be a bar to this individual ever securing a license in another state if the facts followed him. At another place during the same week a physician was convicted of swindling one of his patients and sentenced to three months' imprisonment. When he has served his time, he will seek another field and succeed in getting a license elsewhere, because, except in a very few states, his antecedent professional and personal character will not be inquired into. These are not isolated instances. Our profession should purge itself of the dishonorable and criminal in its ranks as the legal profession disbars its criminal members. It is a duty it owes to itself as well as to the people. But to be able to do this it will be necessary that it have some method of keeping a record of its members no matter where they may be or how often they may move. This means a system of the registering of and keeping in touch with all who are legally entitled to practice, whether they are members of the regular organization or not. This may appear to many to be something that is impracticable, impossible and not necessary. But it is both practicable and possible, as shown by similar achievements in other spheres of action, and it is absolutely necessary if professional organization is to mean anything. A system of registration, as recommended by the Committee on Reorganization, which will be referred to later, gives the organization information about each individual legally entitled to practice, and his qualifications. It puts a label on each one. When all the states are organized, it will be a simple matter to follow each individual, no matter how often he may change his location. By a system of cards, members will be transferred from one county society to another without expense or trouble. Members of the organization who are anxious to be classed as reputable will not object or hesitate to transfer their membership when relocating. Others, for obvious reasons, will not co-operate, but rather resist such registering or transfering of information regarding themselves. In such cases the information desired may be difficult to obtain, but it can and must be had no matter at what cost. Thus the record of each will be known no matter where he may be. As the Committee on Reorganization said in its report: "When a little thought is given to this proposition, it will not be found so difficult as at first might be supposed. The local registration of physicians, as provided by law in most of the states, will be a great assistance in keeping up such a system. A 'card index' method of identification of the legal practitioners of the United States is practical, of easy accomplishment, and will do more to put down quackery and expose pretenders than anything else that can be done. It gives an answer to the questions, 'Who is he?' 'Where is he from?' 'What are his qualifications?' 'What is his reputation?'"

Physicians' Directory.

Bearing on this interesting question another paragraph of the Committee's report must be quoted: "Another thing greatly needed is a reliable physician's directory or register. Business houses are publishing what are called medical directories, but without exception all are unreliable. The best of them contain the names of pretenders, patent-medicine vendors, horse doctors, *et id genus omne*.* The qualifications may be given correctly, if the necessary information can be gotten easily, otherwise not. The profession in this, as in many other ways, is used by commercial houses as a means for money-making, and if there is money in publishing a directory, and there most certainly is, the profession should have it and at the same time control it. . . . With such a system of registration as recommended, information necessary for issuing a directory will always be ready without extra expense; it will insure a reliable book and one that will mean something. It will not be necessary to go outside of the profession for anything. The printing establishment now owned by The American Medical Association, with a little addition, can get out the book. State directories can be printed, and the same material, without any change, can be used in making the national directory. There will be no duplication of work. The national directories can be issued bi- or tri-ennially, and a supplement annually, and also the state, when called for, separately and annually. The matter when once set up can be left standing, and corrections made as necessary. The Committee believes that the publication of official, reliable directories, state and national, is worthy of earnest consideration on the part of every physician."

*An exception might here be made of the excellent "Directory of New York, New Jersey and Connecticut," published by the New York State Medical Association. Even this, however, on account of the lack of the proper machinery of organization hitherto existing, has its imperfections, while nearly approaching the desideratum than anything else of its kind existing.

It would be superfluous to take space to further consider reasons for organization. What we have already said has been simply repeating what every physician who has given thought to the subject has long since known. It must be emphasized, however, that the idea of a medical society being a scientific organization for educational purposes only must be abandoned. The times and the existing social and political conditions demand not only a different system of organization than has prevailed, but also recognition of broader views regarding the functions of medical societies, if the integrity and honor of the profession are to be upheld. The haphazard, loose, unsystematic and antagonizing methods that have been prevailing must give way to business-like organization and a systematic co-ordination and centralization of all the bodies into one.

Importance of County Societies.

Keeping in mind the objects of organization, it will readily be appreciated that the county society is the most important of all the medical bodies. While the state and national societies are necessary, their greatest value depends on the fact that in them can be centered the power and influence of the county society, and that through them the county society can be created, supported, encouraged, and made most useful to its members, both for educational and general purposes. Without the sacrifice of time or money in reaching its place of meeting, the county society[1] furnishes to every physician the opportunity of membership with the professional, social and material stimulus belonging thereto; it produces harmony, promotes good fellowship, removes petty jealousies, has an elevating influence on its members, and aids them in educational and scientific advancement. It is through the county society that the individual must be reached and given the opportunity to register his views regarding the measures and questions which affect him and consequently the profession as a whole. Through it must be reached those who are apathetic, indifferent and ignorant of the value of medical associations. Political influence depends on the machinery of which the county society is the all-important part, for only with its aid can we reach and influence the legislator at his home and among his supporters, and consequently where influence will have the best effect. The enforcement of medical laws, the eradication of quackery, which prevails both in and out of the profession, can not be thoroughly accomplished except by the aid of a live county society; collective investigation depends on it to reach out to the individual practitioner for his part of the great work of centralizing medical knowledge. Only through it can be had a record of those legally entitled to practice, including their qualifications, standing, etc.

Why Organization has Failed in the Past.

Bearing this in mind, those who have given thought to the subject and have studied it in all its bearings, have long realized that a system of organization, to be successful and permanent, must have as its basis and unit the county society; that the county societies united together must make the state society, and that the state societies united together must make the National Society, or the AMERICAN MEDICAL ASSOCIATION. But there must be a unity in this trinity and a trinity in the unity, each dependent on the other, but all making one complete organization.

(To be continued.)

1. The necessity for district, in place of county, societies in certain thinly settled territory is recognized, and will be considered later. That district societies, made up of a definite number of county societies, will be valuable is also appreciated.

The Medical Society—A Humble Suggestion.

DETROIT, MICH., Jan. 27, 1902.

To the Editor:—In the beginning, combinations of loyal and sympathetic brother physicians were formed for the single purpose of furnishing to suffering humanity the highest and best results of their united efforts. A miserable and contemptible minority recognizing the fact that all honest scientific avenues to fame and fortune were effectually barred against them, sad to say, hesitated not to avail themselves of this means of infamous and unethical public advertising for their own selfish purposes, prostituting the medical society in the identical interest which the medical society *ab initio* was intended to oppose and condemn.

The medical society, local, state, national or international, stands for much that is lovely and of good report. It would surely be unkind and ungrateful on my part to utter any word of reflection against the time-honored and beneficent institution the "Medical Society." Nevertheless, impelled by a sense of duty to all concerned, I offer the following suggestion as to a mild but in my opinion really important method of reformation in the manner of conducting medical meetings:

Instead of laboriously working up a program on the venerable stereotyped pattern, eliciting stilted and wearisome declamations from inexperienced and injudicious plagiarists, let us in preference have straight, genuine original work plus equally genuine professional intimacy and friendship. For example, when the annual meeting of our State Medical Society occurs let it be understood and duly appreciated that the chief aim and object of the meeting is Goodfellowship, and sweet communion and reunion among men who are in the best and truest sense of the term Brothers. Never for one moment overlooking or ignoring the central and essential proviso that any brother who is fortunate enough to be able to bring with him a real "message," a wise "word of counsel," a "new observation"; a "something," "anything" true and vital to contribute to the pre-existing sum of our knowledge and experience, will have a generous and appreciative audience and an inspiring opportunity to do himself and his *idea* full and ample justice. According to this plan the energetic and loyal secretary would be relieved of the painful duty of drumming up papers from all sorts of sources likely and unlikely, and the members of the agony of listening to papers plagiarized from all sorts of sources likely and unlikely.

Good warm fellowship and rational unlabored intercourse between "brethren in arms and rivals in renown," is surely the great desideratum in this rapid and mercenary age, and that secured, every other good and gracious result must inevitably follow.

The present régime might be fairly and justly illustrated by supposing a literary or social club through its secretary appealing to its members to be present on a certain day and at a certain hour; and imploring each individual member, male or female, to bring along and recite an original poem. Good medical papers are about as rare as good original poems, while wretched medical so-called "papers" are quite as painful to listen to as plagiarized idiotic poetry.

The system of the prearranged symposium on definite subjects carefully selected by the medical society and its friends seems to be a very attractive method and for one I most heartily approve of it. In conclusion, permit me to say that in all loyalty and good faith I humbly submit my suggestion to the readers of THE JOURNAL and the profession at large.

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GRANULAR DEGENERATION OF RED BLOOD CELLS.

The so-called granular degeneration of the red blood corpuscles of Grawitz has been a subject for much discussion. It is characterized by the presence in the red blood corpuscles of basophilic granules. Some investigators consider the bodies to be fragments of broken-down nuclei (karyorhexis), others believe them to be artefacts or postmortem phenomena, while most authors agree with Grawitz in recognizing the basophilic granules, sometimes seen in red blood corpuscles, as due to degenerative changes in the cells, and having no connection with a process of karyolysis. This form of degeneration has been observed in a variety of diseased conditions, such as pernicious anemia, malaria, carcinoma of the stomach, various suppurative diseases, leukemia, lead poisoning, etc. It is especially prominent in cases of poisoning by lead, and may be found in the blood of persons working with lead when all other signs of poisoning by the metal are wanting. Moritz succeeded in producing the basophilic granules in rabbits by feeding them pills of acetate of lead and, like Hamel, he found typical basophilic granules in the erythrocytes in six employes of a lead factory, in only one of whom were any of the usual symptoms of lead poisoning to be elicited. The granular degeneration of the red blood corpuscles was not found by Grawitz in healthy persons, nor in those with tuberculosis, chlorosis, diabetes, measles and pseudo-leukemic anemia.

The latest contribution of Grawitz[1] bearing upon this subject appears to contain some facts with important practical significance. In the comparative examination of the blood of patients with various diseases, he found that the blood of those who suffered from hemorrhage into the intestinal tract, especially those with gastric ulcer, carcinoma of the stomach, and also with intestinal hemorrhage following cirrhosis of the liver, exhibited granular degeneration of the red blood corpuscles in a striking manner, which was not present previous to the hemorrhage and disappeared soon after its cessation. On one occasion he observed this phenomenon in a patient with pulmonary hemorrhage where considerable blood was swallowed. After external hemorrhage the granular degeneration was absent. Such observations led Grawitz to suspect that the blood in the digestive tract gave origin to poisonous substances which were absorbed and affected the nutrition of the red blood cells. To prove this he selected persons who had no changes of the blood and no severe organic diseases and exhibited to them some of the various preparations of hemoglobin which have recently been so much advocated as substitutes for the various preparations of iron. He found in persons, especially females who were already moderately anemic, that granular cells appeared in the promptest manner and with the smallest doses, while in robust men larger doses were required, and in many no effect was obtained.

These observations appear to prove the truth of the conjecture that during the passage of blood or blood preparations through the digestive canal of man, substances are formed which exert an influence upon the nutrition of the plasma of the red blood cells in the circulating blood. It may be that the elaboration of these poisonous substances is accomplished by the action upon the blood of the putrefactive bacteria of the intestine. These observations throw an interesting light upon the occurrence of blood degenerations from autointoxication from the intestines, and especially upon the question of the origin of anchylostomum anemia. In the latter case it is probable that the anemia following anchylostomum infection may be in part due to absorption of toxic substances, which have no connection with the worms as such, but are elaborated from the blood constantly poured into the intestinal lumen. If further investigations substantiate the correctness of Grawitz's observations and his deductions from the same, the numerous blood-making agents which have been so highly praised must be looked upon with suspicion. If they indirectly induce degenerative changes in the blood cells, their lauded advantages over the older preparations of iron becomes very doubtful at least.

1. Deutsche Medicinische Wochenschrift, 1901, xxvii, 908.

DIPHTHERIA BACILLI AND NOMA.

It has been known for a long time that noma occurs in persons, especially children, when the general resistance of the body tissues has been lowered by various diseases, more especially by measles, but also by pertussis, scarlatina, typhoid and typhus fevers, and in one case, reported by Le Count, by amebic dysentery. Writers have generally suspected that some "specific agent" acts upon such susceptible tissues to produce the gangrene, and various investigators have described bacteria which they believed to be the essential cause of the necrosis, but subsequent research has failed to demonstrate the constant presence of any one of these microorganisms.

In October, 1895, Bishop and Ryan[1] reported before the Chicago Pathological Society a case of noma and two cases of ulcerative stomatitis, all occurring in brothers who had recently recovered from measles. From the case of noma and from one of the cases of ulcerative stomatitis, cultures of bacilli were obtained which cor-

1. Transactions of Chicago Pathological Society, 1894-95, i, 252-264; THE JOURNAL A. M. A., 1895, xxv, 1043-1044.

responded culturally and morphologically to the diphtheria bacillus, but which possessed only a low degree of virulence for guinea-pigs. In stained sections of the tissues from the case of noma, the same bacteria were found in abundance at the line of advancing necrosis. In the other case of ulcerative stomatitis the cultures are of little interest, as they were made after prolonged application of antiseptics. In view of the reduced virulence of bacteria isolated, Bishop and Ryan hesitated to state positively that they were true diphtheria bacilli. In 1896 Nicolaysen examined two cases of noma bacteriologically and found in each a bacillus resembling the diphtheria bacillus, but not pathogenic for experimental animals. In 1898 Freymuth and Petruschky reported two cases of noma in which diphtheria bacilli were found and in both of which diphtheria antitoxin was used with favorable results. They call attention to the reduced virulence of the bacilli. In view of the subsequent studies, it is quite probable that the organisms of Bishop and Ryan and of Nicholaysen were true diphtheria bacilli. Recently Walsh[2] reported the finding of diphtheria bacilli in eight cases of noma. Sailer[3] has just published two cases of noma, complicating typhoid fever. In the necrotic and gangrenous areas of both cases the diphtheria bacillus was found by cultural examinations. Sailer says that the first article in which attention was called to the possibility that noma, in some cases at least, is due to the diphtheria bacillus was that of Freymuth and Petruschky. This is certainly an error, as Bishop and Ryan clearly discussed such a possibility and were evidently strongly of the opinion that the organism described by them was the diphtheria bacillus with reduced virulence. The credit, therefore, of first calling attention to such a possibility is clearly due to the American observers.

Sufficient evidence is now at hand to show the close relationship between some cases of noma and the diphtheria bacillus, and to demonstrate the value of the diphtheria antitoxin as a therapeutic measure in such cases. In all cases of noma, as in other forms of probable infection by diphtheria bacilli, the administration of diphtheria antitoxin, until a bacteriologic examination can be made, is strongly indicated. Prophylactic measures should also be carried out.

2. Proceedings of the Philadelphia Pathological Society, June, 1901, 179.

3. American Journal of the Medical Sciences, 1902, cxxiii, 59-67.

PHYSICIANS AND DENTISTS.

The intimate relation of the condition of the teeth to the general health is becoming more and more recognized. After middle life many digestive disturbances are intimately associated with poor teeth. He who treats a patient for digestive derangement without first ascertaining the condition of the teeth neglects not only an important aid to the recognition of the cause of the condition in many cases, but also fails to find one of the most significant indications for treatment. Hunter's articles[1] and his book on "Pernicious Anemia" have called special attention to this subject. There seems no reason to doubt that carious teeth may not infrequently be the source of serious gastric disturbance and even eventually of the anadenia of the stomach that is associated so often with pernicious anemia. Caries of the teeth in these cases may not be of the kind that produces serious discomfort. It is the latent painless foci of decay that especially prove niduses for bacterial growth and so flood the gastro-intestinal tract with septic micro-organisms that can not but prove harmful.

Of late we have come to realize that the mouth may prove a source of many infections. In present-day medical thought, acute rheumatism is believed to be of infectious origin. The portal of entry in many cases is undoubtedly the tonsils. The presence of other micro-organisms in the mouth, fostered as they are by carious teeth, is believed by many to be the cause for the change in the mouth secretions that encourage the multiplication of the bacilli whose entrance into the circulation sets up the joint symptoms. Mild forms of endocarditis and pericarditis, spoken of as rheumatic, for want of a better name, though they are associated with no joint symptoms, not infrequently owe their production to infection from the mouth. These conditions are often spoken of as idiopathic because no definite lesion of origin can be traced. In many of them, however, oral septic conditions are the direct cause. Obscure cases of so-called malignant endocarditis may have their origin in the mouth.

Unclean dental instruments may very readily be the occasion for the introduction of many forms of virulent bacilli into the tissues. Dr. Willy Meyer recently called attention to the fact that osteomyelitis may be traced to infection after careless dental manipulations. It is manifest then that we must not only be careful of the condition of patients' teeth, but must be assured that dental treatment is carried on with due attention to modern surgical methods. Dentists are surgeons in the fullest sense of the word, with all a surgeon's responsibilities. It is perfectly easy for them to point to many patients operated upon without the niceties of asepsis who yet suffered no inconvenience from the neglect. Susceptible individuals will surely be affected. Delicate persons, rapidly-growing children, anemic adolescents and convalescents from prolonged illness, are especially liable to suffer from such neglect. It is these that the physician has oftenest to direct to a dentist's care. He must in every case assure himself that his patient is to be subjected to no additional risks because of dental professional neglect. The physician and dentist should have closer relationship than prevails at present.

1. The Lancet, Jan. 27, 1900, et seq.

PROF. EMIL SCHEFFER.

In the obituary column will be found the announcement of the death of Prof. Emil Scheffer of Louisville.

He was a chemist, well known for his researches to obtain a purified pepsin. Previous to his investigations nearly all the pepsin used in America was obtained in a crude form from Europe. Scheffer noticed that such salts as sodium and magnesium sulphates and sodium chlorid precipitated pepsin. Following this observation, he devised the following process: The mucous membrane of the pig's stomach, dissected off and minced, was macerated in acidulated water during several days. The liquid was strained, clarified and mixed with sodium chlorid. The floating pepsin was skimmed and dried and sugar of milk added to make a saccharated pepsin capable of dissolving twelve times its amount of coagulated pepsin. His purified pepsin was made by redissolving the pepsin in water acidulated by HCl and precipitating, etc.; "a half-grain of this dissolved 1500 grains[1] of albumen." As the result of Professor Scheffer's investigations, pepsin is now manufactured in the United States in large quantities.

SCHOOLS OF MEDICINE.

Common talk about "schools of medicine" is too often allowed to go unchallenged because we do not emphasize the fundamental standpoint of scientific medical work. "Regular" physicians belong to no "school of medicine;" they are thus differentiated from those who hold certain tenets. That they are not "allopaths," that, in fact, there is no allopathic school, needs perennially to be insisted on. Allopathy or heteropathy, vide Webster, are synonyms invented by Samuel Hahnemann to designate a scheme of treatment which produces symptoms opposite to those from which the patient suffers. If such a rule of practice ever flourished, it has long since fallen into disuse. The teachings in the "regular" medical schools include no *à priori* generalizations about the causes of disease or actions of remedies. Teaching and practice are based, not on preconceived or inherited ideas, but on the logical principle of induction—first the gathering of facts enough to probably eliminate error, and then the drawing of conclusions from these facts. The method has been the same for all great investigators of nature, Bacon being its first exponent. Scientists whose work is firmly established on careful thinking and adequate results are often indifferent to lack of appreciation and misunderstanding outside of their immediate circle. They make little attempt to educate the public to any conception of the value of the best scientific efforts. The result of such neglect by medical men is apparent to the practitioner. He finds that the opinion and patronage of even the intelligent public are far more influenced proportionately by what this or that well-organized and skilfully advertised "school of medicine" has to say, than by all the painstaking research which has built up modern scientific medicine.

MEDICAL CLUB PRACTICE.

The evil of club practice that is beginning to be felt in some places in this country is a matter that the laity as well is the profession would do well to consider. No class of service can be obtained forever for less than its real value; as the old darkey preacher said, apologizing for his small remuneration, if it was poor pay it was also "mighty poor preach." With the general disapprobation of the medical profession towards the practice it is not likely that many really able and competent physicians will take up with it for any length of time, and it is a sure rule that overwork and poor pay will not breed conscientious and skilful practitioners. There is, moreover, no inspection of or control over the product of a "sweated" doctor; the one who avails himself of his dubious services will have to take his chances, and these may, more often than he thinks, be rather slim as regards any real benefit in a serious case. It is not the improvident poor but the moderately thrifty individual who wishes to get something for his money that patronizes club doctors, and is "sold" through his ignorance or neglect of the very obvious moral and economic law that everything of real worth commands its price. Under the ordinary conditions of competition it is in the interest of the physician to do his best. Under the club practice the reverse is the case, and we do not claim that medical men who would knowingly engage in it are such self-denying saints as to neglect their obvious interest for the good of their swindling proprietors. These facts are well brought out in the report of a special commissioner of the London *Lancet* in its issue of January 4. It will be a good thing to impress upon the laity these aspects of the case; they evidently need some instruction in this special line of social economics. The evils to the profession, its degradation, etc., by club practice are self-evident to its members, but we have not been always altruistic enough to be sufficiently impressed by the evils to its supposed beneficiaries.

1. U. S. Dispensatory, 18th Edition, p. 1013.

HEALTH OF HAVANA.

The December report of the sanitary authorities of Havana shows that that city had for the month a mortality ratio of only 20.47, which places it among the fairly healthy cities of its population and in an exceptionally favorable grade for a city in the tropics. What is still more significant, however, is the fact that yellow fever has for three months contributed nothing whatever to its mortality. Only three non-fatal cases were reported in October, and none at all since. The average mortality from this cause for the years preceding for which reliable records exist, 1871-1900, gives an average of about 30 annual deaths from this cause in December; in 1899 and 1900, with every attention to sanitation according to the then prevalent ideas of care as to infection, isolation, disinfection or destruction of fomites, etc., yellow fever was fully as prevalent in December as in the average of preceding years, excluding only the exceptional December of 1896. Only during the past year has any attention been given to mosquitoes as a cause, while at the same time the precautions as regards fomites were entirely laid aside, and the result is that the city has been free from the fever for the first time in a century. Taking the yellow fever year as beginning April 1, and comparing the last eleven years, the minimum number of deaths for the nine months, April to December, was 101 in 1899, the maximum 1262 in 1896, the mean 440. In 1901 under the new methods of prevention the deaths for this period

numbered only five. If there is any experimental proof that, so far as it goes, could be more convincing, we have not been able to imagine it. Considering the practical difficulties in exterminating the mosquito, the success is most remarkable and encouraging for future work in this direction. The report shows what can be done by efficient sanitation under most unfavorable conditions.

OSTEOPATHY IN NEW YORK.

The "osteopathy" bill before the New York Legislature is a fine sample of special legislation. It proposes to give to these masseurs all the rights and functions of medical practitioners to treat all kinds of diseases, sign death certificates, etc., without any state examination whatever. All that it requires is that they shall be members of the Osteopathic Society and payment of a fee of ten dollars. It is some comfort to know that the medical profession in the state is alive to the situation and is not slumbering over it. It is also satisfactory and encouraging to know that the lay press duly appreciates the conditions. The great New York dailies, the *Tribune*, the *Sun*, and the *Times*, speak in no doubtful tones and show that the intelligent among the laity are with us. The New York *Times* suggests the *reductio ad absurdum* by the proposition that some sensible assemblyman introduce a bill making it legal for any adult male citizen to sit in the chamber and legislate for the people. The little formality of an election is as unreasonable as demanding any examination into the qualifications of a would-be doctor, and it thinks the opportunity to demonstrate this at Albany is too good to be lost. The fact that the osteopaths have received a partial recognition or an exemption from the provisions of state practice laws in some states is an unfortunate one, but it will not be any excuse for the proposed New York legislation which proposes to put them at once on the same plane as all other practitioners without the wholesome safeguards that are demanded of the latter. Its presentation is an insult and its passage would be a wrong to every one who has duly qualified himself by study and expense and proven his competency under the existing laws. If osteopaths are to be permitted to practically nullify the New York medical practice acts what are we to look for elsewhere? If this bill should go through and receive the signature of the Governor, then farewell to any pre-eminence New York can claim for its medical standards.

DIVISION OF THE FEE.

The giving and taking of commissions has been repeatedly decried and the consensus of opinion among honorable men is that, unlike charity which "blesses him who gives and him who takes," it debauches both. That the practice is growing there can be no doubt. The peddling of cases from surgeon to surgeon by "drummer-physicians" who make a trade of their profession, caring less for the ability of the operator than for the percentage he gives, is ordinarily dwelt upon at length. It is clear, however, that the consultant surgeon or specialist who gives such a commission is equally culpable. He defrauds the patient, places himself in the power of the case-vendor, and does himself a great injustice. He defrauds the patient by charging him for something he does not give. The surgeon is called to the case in question because of his supposed superior knowledge and operative ability. For the exercise of this knowledge and ability he has a right to command a fair price, but anything added to this, for the "drummer," is nothing more nor less than obtaining money under false pretenses. He puts himself in the power of the case-vendor the moment he bribes this individual to send him a case. Bribe-givers and bribe-takers are equally guilty in criminal courts, and they are equally despicable according to the code of ethics which governs the actions of all honest practitioners. The bribe-taker may at any time, either by intention or indiscretion, bring justly merited disgrace upon the unprincipled operator. No self-respecting surgeon can afford to hazard his reputation in the hands of such a bartering auctioneer. The percentage demanded by the case-vendor can be gradually increased, and the operator, having taken the first wrong step, must compete with other men as dishonest as himself. The injustice done the operator is a justly merited punishment, since he allows a third party to receive pay for the exercise of his own ability. The essential wrong, however, is that the patient is defrauded. As we stated some time ago,[1] the question simply resolves itself into this: Does the patient know of the transaction? If so, then it is legitimate and ethical; if not. it is collusion.

INDICATIONS FOR OPERATIVE TREATMENT OF DIPHTHERIC STENOSIS OF THE LARYNX.

Although the employment of antitoxin in the treatment of diphtheria has reduced not only the mortality from the disease but also the frequency of stenosis of the larynx and of the necessity of its relief by operative measures, cases do occasionally occur in which the obstruction to breathing is so pronounced as to render such measures imperative. In these cases also the good effects of serum therapy have been manifest. As between intubation and tracheotomy in cases in which operative intervention is required, it may be said that the former has steadily grown in favor, and its advantages, when it is indicated, are so obvious as to require no recapitulation here. On the other hand, conditions are sometimes present that render intubation impracticable or inadmissible, or at least render tracheotomy preferable, and it is therefore desirable to have and to keep clearly in mind the factors that determine the choice in favor of one or the other of these operations. This subject has received consideration in a study by Drs. George Alsberg and Sigmund Heimann[2] of the cases of diphtheria, to the number of 4033, observed at the Kaiser- und Kaiserin-Friedrich Kinderkrankenhaus in Berlin for the ten years from 1891 to 1900. As a result of this analysis it is concluded that operative intervention in cases of stenosis of the larynx of slight and moderate degree should be obviated so far as possible by means of antitoxin and the employment of sprays. Primary intubation is indicated in all cases of stenosis of the larynx of severe degree, in which, so

1. JOURNAL A. M. A., Feb. 2, 1901, p. 326.
2. Archiv für Kinderheilkunde, 33 B., H. 1, 2, p. 98.

far as the clinical picture makes it appear possible, a cutting operation can be avoided. Primary tracheotomy is indicated in the presence of asphyxia and collapse, of pneumonia, of severe heart disease, of paralysis of the palate and diaphragm, of profound anatomic changes in the pharynx, as well as marked tumefaction of the entire pharyngeal structures when necrotic. Secondary tracheotomy is indicated when the symptoms of stenosis persist in marked degree with the tube in place, providing its lumen is not occluded, when pneumonia supervenes, and when paralysis of the palate and diaphragm supervenes. Intubation is not to be recommended in the case of nursing infants, on account of the diminutiveness of the parts and of the narrow lumen of the pharynx, but especially on account of the increased difficulty in feeding from the presence of the tube and which at this time of life is of vital importance.

Medical News.

ALABAMA.

Birmingham Hospital.—The Hillman Hospital Association is about to erect a hospital in Birmingham, to take the place of the temporary hospital now in use.

Health Board Election.—At a meeting of the Birmingham Committee of Health, January 15, Dr. Edward H. Sholl, was re-elected president and Dr. Dyer F. Talley, secretary.

New Hospital for Montgomery.—The Sisters of Charity have purchased a site for their new hospital in Montgomery at a cost of $23,000. On this site they will erect a building to cost not less than $50,000.

Osteopathy in Alabama.—Judge Samuel E. Greene, of the Criminal Court, has decided that osteopathy is the practice of medicine, and any person engaged in the same in Alabama can be forced to procure a license for practicing medicine. His decision was based on the definition of the word "medicine," which is, "science, which relates to the cure, prevention or alleviation of disease." The defendant claimed that osteopathy was not the practice of medicine, as no drugs were used.

CALIFORNIA.

Scarlet fever is prevalent in East Oakland, Orville, and Oakland. The schools in Oakland are closed. In December 56 cases were reported and 30 cases during the first week in January.

Los Angeles Emergency Hospital.—The contract for this hospital has been let and by its terms the building must be completed in every particular within one hundred days. The building will accommodate 150 patients.

Stockton Board of Health.—At the meeting of this body for organization, January 13, Dr. Charles R. Harry was elected president; Dr. Samuel E. Latta, vice-president, and Dr. Sylvester B. Davis, city health officer, and secretary.

Sacred Heart Hospital, Oakland.—The Sisters of the Sacred Heart, Oakland, have determined to erect a hospital on property owned by them and adjoining the proposed Oakland Medical College. The first building is to cost about $50,000.

Telephones and Disease.—The Board of Health of San Francisco passed resolutions at its meeting, January 15, declaring that a very potent agent in the dissemination of disease is to be found in telephones, particularly those in public use, and requesting all inventors and manufacturers of appliances with germicide properties for attachment to telephones to forward working models of the same for examination to the board within the next sixty days.

COLORADO.

County Physician's Report.—The physician of Arapahoe County reports that during 1901 he made 2221 calls and saw 6634 office patients, gave 345 prescriptions and furnished medicine in 7492 instances. There were 865 individuals admitted to the county hospital and 60 to the poor farm.

Consumptive Home.—Charles L. Adams has given $50,000 to build an annex to the consumptive home in Denver, in memory of his deceased wife and to be known as the Mrs. Charles L. Adams annex. Accommodations will be furnished to consumptives of moderate means for $6 a week.

Directors versus Men.—The directors of the Grant Smelter, Denver, insist that Drs. Lewis E. Lemen and Hugh L. Taylor shall treat the employes. The men, who pay a dollar a month each for medical and surgical care, demand that Dr. Benjamin F. Wooding be exclusively employed. The labor commissioner has now asked the attorney-general to decide who has the right to select the surgeons of a company, the men who contribute monthly from their pay, or the company itself.

The Honored Dead.—The deaths on the same day of Drs Clayton Parkhill and J. T. Eskridge caused profound grief in Denver. The medical staff of St. Luke's Hospital passed resolutions of sorrow. The Arapahoe County Medical Society, at a special meeting, decided to set apart its next meeting as a memorial. The County Court adjourned in respect to the memory of the deceased, and the Chamber of Commerce adopted resolutions regarding the death of Dr. Eskridge. On account of his military services, Dr. Parkhill was buried with military honors.

CONNECTICUT.

Waterbury Hospital Bequest.—By the will of the late Frederick A. Spencer of Waterbury $10,000 is left to the Waterbury Hospital, subject to the life interest of a sister.

Sand View Hospital Fire.—A fire at Sand View Hospital, Stamford, January 8, caused much damage but fortunately was not attended by loss of life, as the patients were all removed in safety by the attendants.

Doctor Wins Suit.—Dr. Frank N. Loomis, Derby, who was sued for $5000 by Martha A. Pope of Orange for damages alleged to have been received by reason of the defendant's carelessness in setting arm of plaintiff, has won the suit and will recover costs.

Yale Appointments.—In the current catalogue of Yale Medical School, New Haven, Dr. Frederick N. Sperry is noted as full demonstrator of anatomy; Dr. William S. Banes, as second assistant to the therapeutic clinic; Dr. W. H. Crowe, as clinical assistant in ophthalmology; Drs. F. H. Reilly and Thomas G. Sloan as assistants in the surgical clinic and Dr. Thomas C. Haines, as assistant in obstetrics.

December Diseases and Deaths.—The report of the State Board of Health shows that measles has slightly increased over the previous month. There were 36 cases reported from 16 towns. Scarlet fever prevailed in 48 towns, from which 260 cases were reported, with 18 deaths. Diphtheria and croup were unusually prevalent; 196 cases were reported with 43 deaths. A marked epidemic occurred in Stafford Springs and is still progressing. Typhoid fever is less prevalent than usual, but in New Haven the consequences of the epidemic of last April are still apparent, not due, however, to the infected water supply, but to neglect of perfect disinfection of the discharges from previous patients. One case of typhus fever was reported in Stonington. It is the only case of typhus in the state and the first one reported in several years. The total deaths for 1901 numbered 14,795, that being 1,545 less than in the preceding year. In March occurred the largest mortality, 1441; in June occurred the smallest number, 1022. The most fatal disease during the year was consumption, 1443. The next highest mortality was from pneumonia, 1382. Measles was fatal in the year to the number of 71. Scarlet fever caused 78 deaths. Diphtheria and croup killed 308. Typhoid fever mortality was 262. Whooping cough mortality was 92. There were only 3 deaths from smallpox.

ILLINOIS.

Scarlet fever has caused the town of Arthur to be quarantined, its schools to be closed and public meetings prohibited. ——Many cases exist in Florence Township, Stephenson County.——The disease still persists in Joliet owing to laxness of quarantine.——An epidemic is said to exist in Decatur.

Hospital Dedicated at Lincoln.—The new Deaconess Hospital at Lincoln was dedicated with fitting exercise January 19. The building is a three-story and basement structure, 108x85 feet. It contains 48 private rooms and four wards, in addition to the administration and operating rooms, and has cost about $35,000.

Chicago.

Diphtheria and scarlet fever are especially prevalent around the Harrison school at Wentworth avenue and Twenty-third place, and near Ogden and Turner avenues in Lawndale.

Hospital Gets Interest.—Mrs. Sarah A. Hawley has agreed, in consideration of an annuity of $3000, to relinquish her right

to certain property valued at $178,500 to the Chicago Orphan Asylum, Presbyterian Hospital and Newsboy and Bootblack's Association.

The City's Insane.—During 1901, the Detention Hospital received 1503 patients, who were distributed as follows: Cook County Asylum, Dunning, 667; Illinois Northern Hospital, Elgin, 203, and Illinois Eastern Hospital, 166. The remainder, about one-third, were discharged.

Public Gynecological Clinics Stopped.—Warden Healy, of the Cook County Hospital, on January 23, refused to permit an operation on a woman in the clinical amphitheater. He stated that he would not permit women who were patients of the hospital to be indecently exposed before medical classes.

Chicago's Health.—The Department of Health reports much disease, but of mild type. The 480 deaths from all causes recorded last week give an annual rate of only 13.73 per 1000 of population—a reduction of about 7 per cent. from the rate of the previous week, and of 3.8 per cent. from that of the corresponding week last year.

Smallpox.—Only eight new cases of smallpox were discovered during the week—two imported from Wisconsin and both sent to the health office in advanced eruptive stage; three were contracted from previous city cases and the origin of the remaining two is as yet unknown. Five had never been vaccinated at all, and the remaining three, aged 29, 30 and 50 years, respectively, had only imperfect traces of vaccination in childhood, never repeated.

INDIANA.

St. Mary's Infirmary.—A new infirmary building to cost $30,000 is being built for St. Mary's Academy, South Bend.

Mishap to Physician.—Dr. Oscar K. Guyer, Lewisville, while making a professional call, January 19, had a slight stroke of paralysis, fell from his buggy and broke his leg.

Smallpox has broken out in La Grange County, where three cases are reported.——On account of a case in the Indianapolis Foundry, the 400 employes of that establishment have been vaccinated. Indianapolis had 20 cases this year up to January 20.——Ten cases are reported in the western part of Howard County, where churches and schools have been closed.

IOWA.

Certificate Revoked.—The State Medical Board has revoked the certificate of Dr. J. W. Crofford, Lamoni, who was recently convicted of the murder of Miss Maude Stone, and sentenced to the state penitentiary.

Physician Fined for Breaking Quarantine.—Dr. Samuel C. Kirby, Grand Junction, charged with breaking a smallpox quarantine last summer, was found guilty, January 16, and sentenced to pay costs of about $400. He states that he will ask for a new trial.

New Hospital for Cedar Rapids.—Plans have been completed for a new hospital to be erected at Cedar Rapids by the Sisters of Mercy of the Church of the Immaculate Conception, to cost $50,000. Abraham Slimmer has agreed to give an amount equal to that raised by the Sisters. They have already secured $16,500.

Hospital for Marshalltown.—The Marshalltown hospital fund has received $2000 from the estate of the late Bishop Lenihan; Father Lenihan, of Marshalltown, has added $1000, and Archbishop Keane of Dubuque has pledged $2000 additional. George F. Kirby, Marshalltown, has donated $1000 to the fund. This makes a substantial start toward the $20,000 required.

Staff of Children's Home.—The medical staff of the Iowa Children's Home, Des Moines, held its annual meeting, January 22, and elected Dr. James W. Cokenower, president and attending surgeon, and Dr. Lenna L. Meanes was re-elected secretary. The staff for the year is as follows: Drs. James W. Cokenower, William W. Pearson, Granville N. Ryan, P. J. Callahan, Charles F. Smith, Lenna L. Meanes, J. F. McKittrick and Clifton Scott.

MARYLAND.

Hospital Endowed.—It is announced that a wealthy citizen of Hagerstown, who wishes to do good by stealth, has promised to contribute $50,000 toward the endowment of a hospital in that city as soon as the plans have been formulated by the Washington County Medical and Chirurgical Association.

New Officers Elected.—The Maryland Hospital for Consumptives, Towson, at its annual meeting, elected Drs. Robert T. Wilson, George B. Reynolds and Henry B. Jacobs directors. The visiting staff consists of Drs. Henry B. Jacobs, G. Milton Linthicum, Walter P. Smith, and Warren Buckler. Dr. Frank R. Rich is resident physician.

Health Board for Baltimore County.—A bill has been introduced in the legislature to provide for the appointment of a board of health for Baltimore County, to be composed of three reputable physicians, the state's attorney and the president of the Board of County Commissioners. The board's expenses are limited to $2500 annually, and the board is empowered to select a secretary at $900 a year.

MICHIGAN.

Hospital Opened.—The Michigan Children's Home Hospital erected at St. Joseph, at a cost of $7000, by Mrs. Chapin, of Niles, was formally opened, January 2.

The oldest physician in Grand Rapids, Dr. George K. Johnson, was given a luncheon, January 17, by his immediate professional associates, on the occasion of his 80th birthday. Dr. Johnson has practiced in the state since 1846, and in Grand Rapids since 1856.

Detroit Clinical Laboratory.—A laboratory has been incorporated in Detroit for chemical and bacteriological analysis and pathologic examinations for the treatment of disease, giving such instructions therein, and in hygiene, as may from time to time be necessary. The directors of the institution are Dr. Charles G. Jennings, president; Dr. William F. Metcalf, vice-president; Dr. Wadsworth Warren, secretary-treasurer, and Drs. Oscar Le Seure, Arthur D. Holmes, Frederick W. Mann and Ernest T. Tappey. The laboratory staff consists of Dr. Thaddeus Walker, superintendent of the laboratory and chief of the department of hematology and clinical analysis; Dr. Henneage Gibbes, chief of the department of bacteriology; Dr. Frank T. Stephenson, chief of the department of chemistry, and Dr. Preston M. Hickey, chief of the *x*-ray department.

Recommendations for Medical Instruction.—In the last report of the superintendent of public instruction he makes the following recommendations for medical colleges:

1. A standard of preliminary education should be required, and a board created to examine all students before entering upon the study of medicine.
2. Some safe, uniform standard for graduation ought to be fixed and insisted upon as a condition precedent to a license to practice medicine.
3. The financial solvency and stability of each institution should be more carefully guarded and insisted upon.
4. Medical colleges should not be chartered in small towns where clinical and hospital facilities, so necessary to the proper education of a physician, are not ordinarily found.
5. A constant and thorough visitation and inspection of such institutions should be regularly made by a board of visitors competent to fairly judge of their merits.
6. The capital of every medical college should be large enough to warrant the employment of men learned in their profession and the provision of equipment in all branches adequate to promise a proper medical course.

NEBRASKA.

Smallpox.—In the first eleven days of the new year 49 cases of smallpox were discovered in Omaha.

Scarlet fever is epidemic in Clearwater, where the public schools have been closed and public gatherings suppressed.——Kearney reports five cases from as many foci of infection.

Norfolk Hospital Deserted.—Since the fire at the Norfolk hospital all the patients have been transferred to the state hospitals at Lincoln and Hastings, and the employes have been relieved from duty.

Personal.—Dr. Fred Rustin, Omaha, has been appointed surgeon-in-chief of the Presbyterian Hospital, vice Dr. Charles C. Allison, who has gone west in search of health.——Dr. A. H. Simonton, acting assistant surgeon, U. S. A., stationed at Fort Robinson, has asked for an annulment of his contract and will return to Alabama.——Dr. Walter H. Wood, Maywood, has gone to Europe for post-graduate study.

NEW JERSEY.

Diphtheria at Whitehouse has caused the temporary closure of the public schools at that place.

Hackettstown Epidemic.—The old story of "Cuban itch," "Philippine measles," etc., seems to be responsible for the smallpox epidemic which cut off Hackettstown from the rest of the world. There have been 40 cases, but no deaths. At Allamutchy and Vienna four cases exist.

Cooper Hospital, Camden.—At the annual meeting of this institution the following were elected as members of the staff: Medicine, Drs. H. Genet Taylor, William A. Davis, E. L. B. Godfrey and William R. Powell; in surgery, Drs. Daniel Strock, Joseph L. Nicholson, Paul M. Mecray and Edward A. Y. Schellenger; in ophthalmology, Dr. William R. Powell; in gyne-

ecology, Drs. Dowling Benjamin and Joseph S. Baer; in laryngology, Dr. Ernest S. Ramsdell, and in pathology, Dr. Walter S. Bray.

NEW MEXICO.

Bazar for Hospital.—The bazar recently held for the benefit of St. Joseph's Hospital, Albuquerque, which is being constructed by the Sisters of Charity of Cincinnati, Ohio, added more than $2600 to the fund for the equipment of the institution.

Dr. Judd Medical Director of the Montezuma.—Dr. Norman W. Judd, for a long time on the editorial staff of THE JOURNAL, but who was obliged to go to New Mexico for his health, has been made medical director of the Montezuma at Las Vegas Hot Springs.

To Enlarge Railway Hospital.—The chief surgeon of the Santa Fe lines west, Dr. Norman H. Morrison, has let the contract for important additions to the company's hospital at Albuquerque, which, when completed, will make the hospital one of the largest on the entire system.

For Consumptive Sailors.—The Marine-Hospital for Consumptives at Fort Stanton has now more than 100 patients. Six surgeons and about 100 attendants are on duty there. Hyperalimentation, fresh air, regular habits and cleanliness are considered the cardinal points on which the possibility of cure depends.

NEW YORK.

Careless distribution of medicines, drugs and chemicals by leaving such exposed upon the ground, sidewalk, porch or doorway or in any other manner so that children may become possessed of same, is made a misdemeanor punishable by a fine of $25, by a bill introduced by Assemblyman Richter.

Postmortem Examiners.—The State Civil Service Commission has decided that the physicians recently appointed postmortem examiners, physician to jail and penitentiary are not entitled to be compensated because the positions are civil service positions and the physicians previously in office can not be removed except on charges.

Vital Statistics.—A bill has been introduced in the assembly to compel all local boards of health, except in counties wholly within a city of the first class, to file with the county clerk on or before the fifth of each month, a statement of each marriage, birth or death, with the date and place thereof, which occurred during the preceding calendar year in the city, town or village constituting its jurisdiction.

New Lunacy Bill.—Governor Odell's scheme to abolish the boards of managers of state hospitals for the insane, and substitute a visiting board for each district, to be appointed by the governor annually, has met with a storm of opposition. At the hearing in the senate chamber more than fifty charitable institutions in New York City alone were ably represented, and not one of these favored the bill.

Bethel Prohibits Tuberculosis Sanatoria.—The Board of Health of Bethel, Sullivan County, has adopted an ordinance prohibiting the maintenance, within the town limits, of public or private boarding houses or sanatoriums for persons affected with tuberculosis, under a penalty of $50 a week; also imposing a penalty of $10 for the first offense and $50 each week for entertaining a stranger or guest affected by tuberculosis other than immediate relatives or dependent on the family.

Stony Wold Sanatorium.—At the annual meeting of the incorporators of this sanatorium it was announced that the Lake Kushaqua property in the Adirondacks had been obtained for the sanatorium, and that ground would be broken for the buildings in the spring. This site is among the pines of Franklin County, at an elevation of 1730 feet. During the year $48,000 have been raised, but the sum of $60,000 will be required in addition in order to complete the building. The object of this sanatorium is to care for working women and children only who have incipient tuberculosis.

State Hospital for Tuberculosis.—The board of trustees of the State Consumption Hospital met at Albany. Howard Townsend was elected president and Dr. John H. Pryor, of Buffalo, secretary of the board. The officers of the board were authorized to purchase a site for the consumption hospital at Raybrook. Plans for the hospital buildings were examined, but final action was not taken. It is reported that the plans for building the hospital have met with a sudden set-back by the discovery that, according to the constitution of the state, trees on land bought by the state in the Adirondack Park can not be cut down. This prevents clearing the site recently selected for the hospital at Raybrook.

New York City.

Another Decision in Favor of the Loomis Laboratory.—Judge Patterson, in the appellate division of the supreme court, has handed down a decision, sustaining the action of the lower court in dismissing the claim of the New York University to the Loomis Laboratory. The litigation dates back to April, 1898.

German Charity Ball.—The twelfth annual German Charity Ball was held, January 23, under the auspices of the German-Americans, and it is thought that the net proceeds will reach $10,000. This is to be divided among various charities, such as the German Hospital, St. Mark's Hospital, the German Poliklinik and St. Francis' Hospital.

Street Refuse to be Used as Fertilizer.—The new Street Cleaning Commissioner, Dr. Woodbury, has just made arrangements to have the Long Island Railroad take the street sweepings away in sacks and dispose of them to the farmers on Long Island. It is thought that a considerable saving will be thereby effected, and that in time this material may become a source of revenue.

The Osteopathy Bill.—Several medical organizations of this city have sent petitions, resolutions or personal representatives to Albany to actively oppose the osteopathy bill. The fight is to be on the ground that all classes of physicians, no matter what peculiar name they may adopt, should be equal in the eyes of the law, and that to grant special privileges to the osteopaths or to any other particular class will open the doors to quacks and make a farce of our medical laws. Senator Platt, in an interview, has undertaken the advocacy of the osteopathy bill. He quotes Senators Foraker and Cockerill as ardent osteopathists.

A Costly Lying-In Hospital.—The new lying-in hospital, built and equipped by Mr. J. Pierpont Morgan at a cost of $1,350,000, is now ready to receive patients. It is eight stories in height, and possesses many new features both in construction and equipment. To facilitate cleanliness, angles are avoided, not only between the walls and floors, but even in the furniture. The wards are furnished in iron and glass, the floors are of fireproof sawdust, the curtains are hung outside of the windows, and excellent ventilation is said to be secured by a system of fans, which force filtered and warmed outside air into the wards and out again through pipes opening on the roof. Visitors are not allowed in the wards, but are accommodated in a reception room on each floor, and into this room may be wheeled the bed of any patient.

The Smallpox Situation.—The Board of Health has met with an unexpected obstacle in its efforts to fight the smallpox more effectively. It was supposed that as a large increase in the number of vaccinators was needed, it was only necessary to call upon the medical inspectors of the schools. It is true that the vaccinators receive a much larger salary, but they are required to be on duty from 10 a. m. to 4 p. m., and may be called on up to 10 o'clock at night. This alone would make many of the inspectors hesitate to accept the new position, but the fact that this increase in the vaccinating force is only temporary, and that the inspectors could not afterward return to their old positions in the schools, has led to a general refusal to join the vaccinating corps. This is a serious matter, for the disease is reported to be on the increase, and with the delay necessarily incident to the civil service restrictions it will be at least six weeks before new men can be obtained for the work.

The City Milk Supply.—The Rockefeller Institute has awakened a feverish interest in the milk supply of the city by a recently published report of its investigation. It declares that the great bulk of the milk coming to the city is far from pure, and backs up this statement with statistics gathered in connection with its research extending over a period of seven months. The report asserts that 330 outbreaks of epidemic diseases have been traced to milk. Of these, 195 were epidemics of typhoid fever, in 147 of which the disease prevailed at the dairy or farm. In 67 it was due to contamination of well water, and in 24 cases employes at the farms were acting as nurses, while in 10, although still sick, they were at work. There were 99 epidemics of scarlet fever, in 68 of which the source of infection was traced to the illness of persons at the dairy. In 17 instances, the employes were themselves suffering from scarlet fever, and in 10 they were acting as nurses to scarlet-fever patients. There were 36 epidemics of diphtheria, in 13 of which the disease existed at the farm or dairy. Continuing, the report says that more than one million and a half quarts of milk are delivered to New York a day, coming from five different states and forty-four counties, much of it being transported a distance

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of 200 to 300 miles. It is asserted that in 1900 no less than 6055 infants in New York city died from the effects of impure milk.

Exploitation of Tuberculosis Experiments.—So much has been said in the lay press regarding the wonderful experiments made by a Dr. George D. Barney, and his alleged inoculation of Miss King with the disease from a tuberculous cow, that there is no occasion for medical journals to waste much space on the subject. It may perhaps be well to call attention to the final act in this desperate effort to gain notoriety, i e., the obtaining from reputable physicians under false pretenses of certificates concerning the results of a physical examination of this Miss King, together with the heralding of the astounding news that she had not only been inoculated successfully with bovine tuberculosis, but that she had been actually cured of her tuberculosis in the course of a few weeks. Under an assumed name this woman called upon Dr. S. A. Knopf, and gave him a history, which would make it appear that the disease had only very recently developed. The disease was certainly in an early stage, but Dr. Knopf was inclined to think that it had existed longer than a few weeks. She secured a certificate from him on the plea that if she sent such a statement to her uncle in Colorado he might take her to his home. This was on December 5, and on December 9 she secured a certificate from Dr. Andrew H. Smith, also stating that the disease was in its incipiency. On January 14, she was examined by Dr. Austin Flint, who declared that she was free from the disease. It should be noted that no evidence has been submitted to prove that this person was inoculated from the cow, while there is reason to believe that this woman was already suffering from pulmonary tuberculosis at the time of the alleged inoculation.

Buffalo.

The smallpox situation has improved perceptibly. Few cases are reported and they are only of a mild type.

Personal.—Dr. Walter D. Green, Health Commissioner, gave a dinner at the Genesee House for the members of his staff.——Drs. Beebie, Wright, McCarthy and Wheeler are acting temporarily as sanitary officers of the Health Department in the campaign against smallpox in the polish districts.——Dr. Peter W. Van Peyma, who for the past four years has been chairman of the Board of School Examiners, has been reappointed a school examiner by Mayor Knight.

OHIO.

Entire Board Expelled.—To put an end to threatened scandal at the Dayton State Hospital for the Insane, Governor Nash wrote each member of the board of trustees, January 18, requesting his resignation at once.

Hospital Needs Overhauling.—The trustees of the Cincinnati City Hospital are framing a bill appropriating $250,000 for the complete renovation, alteration and remodeling of the institution, which was erected in 1864.

In Memoriam.—The physicians of Caldwell met and passed resolutions eulogistic of the late Dr. John W. Brock.——At a special meeting of the Erie County Medical Society, resolutions were adopted regarding the death of Dr. Elwood Stanley, of Sandusky.

The Cincinnati Hospital Training School held its ninth annual commencement, January 15, graduating a class of seventeen. Addresses were made by Drs. C. A. Fackler and J. M. Withrow. The diplomas were presented by Mayor Fleischmann as president of the Board of Trustees, and the gold badges by Dr. C. R. Holmes.

Hospital Donations.—Samuel Mather, who has previously given large amounts to Lakeside Hospital, Cleveland, has arranged to give $40,000 to the institution under easy conditions.——The mortgage on Huron Street Hospital, amounting to $15,000, has been paid. John D. Rockefeller contributed $5000 and Senator Mark A. Hanna $4000 of this amount.——Youngstown City Hospital is to be endowed with $50,000, the aggregate of one day's wages of several thousand workmen in the Mahoning Valley.

To Revise Health Laws.—The State Board of Health, at a recent meeting, approved the draft of a bill providing for a thorough revision of the state health laws. The proposed law makes many changes in the existing statutes. Among them is a provision requiring local boards and health officers to take all precautions against the spread of contagious diseases. It makes obligatory the posting of placards and the quarantining of patients. Another important change is the provision authorizing the councils of municipalities of less than 2000 inhabitants to appoint a health officer to perform the duties now performed by local boards of health. Much difficulty is experienced in persuading citizens of small towns to serve on boards of health and the state board feels that much will be gained by laying the responsibility upon one man, who is paid for his services. The bill will soon be introduced in the legislature.

PENNSYLVANIA.

Physicians to be Paid.—At a recent meeting of the directors of the Cottage State Hospital, Connellsville, it was decided that the eight local physicians who for ten years have donated their services, be paid during their three months' term of service, $50 per month.

Gifts to Hospitals.—The United States Steel Corporation has donated $1000 in cash and 2¼ acres of coal land valued at $2500 to the Uniontown Hospital Association.——The Philadelphia Hospital for Women is to receive $3000 from the estate of the late Mrs. Rebecca S. Elkinson.

Lancaster Hospital Staff.—At the meeting of the directors of the Lancaster General Hospital the following staff was elected: Medical director, Dr. Martin L. Herr; medicine, Drs. Daniel R. McCormick, Frank G. Hartman and Harry G. Hasenplug; surgery, Drs. Theodore B. Appel, William H. Herr and Frank Alleman; ophthalmology, Drs. George R. Rohrer and Walter B. Weidler; laryngology, Dr. Walter S. Brenholtz; dispensary staff, Drs. Samuel H. Heller, Charles P. Starr and Guy Alexander, and neurology, Dr. Milton U. Gerhard.

Philadelphia.

Alumni Association of the Medico-Chirurgical College.—This Association has elected Dr. Mitchell P. Warmuth, president; Dr. Stillwell C. Burns, secretary, and Dr. Emanuel S. Gans, treasurer.

Bequests.—By the will of the late Wm. McClary, among charitable bequests are $5,000 each to German, St. Joseph's, Samaritan, Episcopal and Presbyterian hospitals, for the endowment of free beds.

Typhoid fever increased to 117 new cases, against 81 for the previous week. The increase is chiefly in West Philadelphia, and is believed to be due to the water supply. The reservoir supplying this section is so small that little if any time can be allowed for sedimentation.

Homeopaths Extol Vaccination.—In a resolution recently adopted by the Germantown Homeopathic Medical Society, unqualified approval is expressed of the "value of vaccination as a preventive of smallpox;" the Society declares itself "heartily in accord with the Board of Health to secure universal vaccination."

Tablet to Dr. Wilson.—A handsome tile and marble tablet in memory of Dr. Charles Meigs Wilson has been unveiled at the Philadelphia Lying-in Charity and Nurse Training School, Eleventh and Cherry streets. The memorial was erected by the fourteen nurses who studied under Dr. Wilson when he was head physician of the school, and bears the inscription: "Erected by his nurses, in loving memory of Dr. Charles Meigs Wilson, who departed this life Dec. 29, 1891."

Smallpox.—There were 90 new cases and 19 deaths for the week ended January 27. The number of deaths equaled the highest number for any previous week. The Department of Public Safety has systematically undertaken to vaccinate the inmates of the hundreds of cheap lodging houses. Two or three of the physicians from the special vaccine corps will be sent at night to a certain house, in company with and under the protection of a detail of police. The latter are directed to see that none of the inmates leave the house until all are vaccinated or have been pronounced by the physicians to have a satisfactory vaccination mark.

Library of College of Physicians.—The Library Committee of the College of Physicians recently submitted its annual report. The number of volumes in the library is 64,916, an increase of 3557 during 1901. There were 211 donors during the year. By the bequests of Dr. John Ashhurst, Jr., and Dr. Alfred Stillé, 1500 volumes and 207 volumes respectively were received. Each of the following presented more than 50 volumes: Drs. T. G. Ashton, George F. Baker, H. A. Hare, J. K. Mitchell, S. Weir Mitchell, L. S. Clark, Francis R. Packard, E. P. Davis and W. B. Atkinson. Thirty-six of the new publications added to the library have been written or edited by Fellows of the College. By the liberality of a few Fellows of the College the collection of rare books made by the late Dr. J. Stockton Hough was secured. As indicating the rarity and value of this collection the librarian states: "Five hundred and

fifteen of the volumes were printed before 1700; 76 were printed in the 15th century, 175 in the 16th, and 264 in the 17th." The committee closes the report by saying: "Our library is believed to rank third among the medical libraries of the world, and is a valuable possession of which the Fellows of the College may well be proud."

TEXAS.

Hospital at Reformatory.—The superintendent of the Gatesville Reformatory has been authorized to construct a hospital for the institution at a cost of $25,000.

State Medical Association.—The next meeting of the Texas State Medical Association will be held at Dallas, May 6 to 9. This is a change of date as well as place of holding the meeting, as it was originally intended to meet at El Paso.

Deficit in Health Department.—A heavy deficit has come to light in the State Health Department, and Dr. I. J. Jones, formerly secretary and assistant to State Health Officer W. F. Blunt, who, it is alleged, went to South America shortly after Dr. Tabor was appointed to succeed Dr. Blunt, is wanted here, Dr. Tabor says, to explain matters. It is alleged that, should he return, he would have to answer to charges of embezzlement and forgery.

Headquarters Southern Pacific Hospital Department Changed.—By a recent order of the manager of the Southern Pacific Atlantic system, the headquarters of the hospital department have been transferred from San Antonio to Houston; the position of medical director has been abolished; Dr. Robert W. Knox has been appointed chief surgeon; and district, local and emergency surgeons, and others are ordered to report to him on all matters concerning hospital department.

Must Report Contagious Diseases.—The state health officer has sent to the county health officers throughout the state and to the city health officers in cities of over 10,000 inhabitants a blank form on which to report the number of cases and deaths from contagious diseases and the exact location of the cases. The following is a list of the diseases: Smallpox, varioloid, varicella, typhus fever, yellow fever, asiatic cholera, typhoid fever, scarlet fever, diphtheria, measles, whooping cough, phthisis pulmonalis.

CANADA.

Smallpox Epidemic.—Dr. J. M. Eaton, medical health inspector for the province of Manitoba, reports, on January 23, that there is an extensive outbreak of smallpox in the Winnipegosis district, which he has investigated, and states that there are upward of 200 cases. He considers the state of affairs to be alarming, as the whole district is virtually honeycombed with the disease. The outbreak is mostly among the half-breeds and fishermen and it is mild in character.

Ontario's Death Rate.—The Registrar-General for the province has handed out a statement with regard to the deaths occurring in the province of Ontario during the year 1901. Ninety per cent. of the population is represented in these returns. During the year there were reported 25,736 deaths, or 13.1 per thousand. The figures for the previous year were 25,382. Scarlatina claimed 209; diphtheria, 512; typhoid, 345; tuberculosis, 2286, 74 less than in 1900; measles, 120; whooping cough, 112.

Quarantine on the Coast.—With the permission of Dr. Montizambert, the Director-General of Public Health, an important change in quarantine arrangements has been made affecting the Empress line of steamers plying between Vancouver and the Far East. Hitherto the liners have been obliged to go to the Williams Head station, and there remain from four to five hours, according to the number of passengers on board. Hereafter, the steamers will only be obliged to touch at the quarantine station when any contagious disease has developed on the voyage. Better connections will thus be made with the overland trains from Vancouver.

A Woman's Hospital.—Much progress is being made in connection with the proposal inaugurated two years ago to have a woman's hospital in connection with the Woman's Medical College, Toronto. Although the campaign thus far carried on has consisted chiefly in organization work for the purpose of making systematic collection of funds, and educational, there is said to be already a nice little sum in hand for the foundation of the enterprise. Nearly four years ago a dispensary was started in connection with the College, which up to the present time has had 9000 patients on its rolls; and it is the increasing demands on the dispensary that necessitates the having of a separate hospital in association with the college work.

A Physician Jailed.—About two months ago Dr. Harbottle, a practitioner of thirty years' standing of the town of Burford, Ont., while walking on the main street and being subjected to indignities at the hands of tormentors, deliberately shot one of his assailants, inflicting a small scalp wound. For many years the Doctor, who is spoken of as being eccentric, has been repeatedly subjected to insults and indignities on account of his outspoken sympathy for the Boers at the hands of residents of the town; the trouble has finally culminated in the Doctor taking the law in his own hands, with the result that he has been sentenced to one year's imprisonment in the Central Prison at Toronto, where he arrived last week. Dr. Harbottle has been assigned to the duty of assistant surgeon at the hospital. Efforts will be made to secure his liberation.

Amending the Ontario Medical Act.—Dr. Jessop, one of the members of the Ontario Legislature, has become the sponsor of a bill and at the same time the champion in the legislature of the Ontario Medical Defense Association. It is proposed to change the constitution of the Ontario Medical Council, which at the present time consists of 30 members. Of this number the homeopathic body of the province, which only numbers about 40 practitioners, has 5 of a representation; the medical colleges, connected with Toronto University, Trinity University, Queen's University and the Western University at London have 8 between them, while the profession throughout the province has the balance, viz., 17, each of these representatives representing at least 250 physicians belonging to the regular profession. This is considered to be very unfair, and it is therefore proposed to abolish the homeopathic and appointed representatives and have the entire 30 members of the Council elected by the whole medical profession of the province.

Royal Victoria Hospital, Montreal.—The governors of this institution held their annual meeting during the past week, when the announcement was made that an extension was to be made to the buildings in the near future, and among other things to be provided was a new operating theater for the gynecologic department. The following additional appointments were made to the staff: Dr. F. B. Jones was appointed assistant in the clinical laboratory. Dr. A. G. Nichols, assistant pathologist; Dr. G. P. Girdwood, director of the medical electrical department; Drs. H. B. Cushing and F. M. Fry, clinical assistants in medicine; Drs. A. Shirres and A. A. Robertson, assistants in neurology; Dr. E. A. Archibald, assistant in clinical surgery; Dr. F. W. Harvey, clinical assistant in ophthalmology; Dr. W. H. Jamieson, clinical assistant in laryngology; Dr. H. B. Yates, assistant in bacteriology; Dr. A. A. Bruere, director of the clinical laboratory, and Dr. H. B. Cushing, medical registrar. During the past year there were admitted to the wards of the hospital 2579 patients, of which number 1254 were free patients.

LONDON LETTER.

The Smallpox Epidemic.

The number of cases of smallpox admitted to hospital continues to increase. The number of patients in hospital, which for the preceding 3 weeks were 506, 538 and 666 respectively, has risen in the last week to 872, during which 305 new cases were admitted against 161, 226, and 261 in the three preceding weeks. The greatest number admitted on any one day was 56. The numbers of deaths from the disease in the past 4 weeks have been 24, 24, 28 and 45. According to the latest returns there are 901 cases in hospital. At a meeting of the Metropolitan Hospitals Board an important report was presented. A number of new hospitals are being constructed as rapidly as possible so as to bring the total accommodation up to 2540 beds, and it is not at all certain that greater accommodation may not be required. The most important part of the report is the vaccination statistics. They tell only the oft-told tale, but in the face of the pernicious anti-vaccination propaganda, which has led to widespread neglect of vaccination, and is partly responsible for the epidemic, they are particularly opportune. The epidemic has now lasted five months, during which 1963 patients have been admitted to hospital. Of these 892 have been discharged recovered and 283 died. The cases have been divided into three classes: 1, vaccinated, i. e., cases showing visible cicatrices; 2, doubtful, which include cases stated to have been vaccinated but showing no visible evidence thereof and cases in which no statement was made but in which the eruption prevented observation as to the cicatrices; 3, unvaccinated, i. e., cases admittedly unvaccinated or bearing no traces of the operation and as to which no statement was made. The gross mortality is 24 per cent., but it must be borne in mind that many recent cases have been included be-

cause they were completed by death, whereas the contemporary cases which would nearly all recover, could not be included until completed. Thus the above figure is too high. The total mortality of the vaccinated cases is 14 per cent.; of doubtful cases, 65; and of unvaccinated cases 50.5. Considering the statistics according to age, under 10 there were only 12 vaccinated cases and no death; 6 doubtful cases, all of which were fatal, and 95 unvaccinated cases of which 52 (54.7 per cent.) were fatal. Under 20 there were 161 vaccinated cases, of which 3 (1.87 per cent.) were fatal; 12 doubtful cases, of which 7 (58 per cent.) were fatal; and 161 unvaccinated cases, of which 79 (49 per cent.) were fatal. There appears to be a distinct diminution in the protective power of primary vaccination after the age of 20, the death-rate rising from 9.85 in vaccinated cases between the ages of 20 and 25 to 28.95 in cases between 35 and 40. The neglect of vaccination is strikingly disclosed by one fact: 21 patients who had been employed in disinfecting work by the various local health authorities were admitted. Not one of them had been vaccinated since infancy. There were also admitted 2 sanitary inspectors, 2 dustmen, 1 undertaker, 1 medical officer of an infirmary who had not been revaccinated. Contrast this with the experience of the management of the smallpox hospitals and of the ambulances. All the persons employed are revaccinated on engagement. Of 2198 persons employed between 1884 and 1900, during which period 17,900 cases were received, only 17 contracted smallpox. Of these 13 were not revaccinated until after they had joined and 4 were workmen who had escaped medical observation. Not one of the hospital staff has ever died of smallpox, and not one has ever suffered from the disease for the past eight years.

The Journal of Obstetrics and Gynecology of the British Empire.

This new journal begins with the present year and will be published monthly. It is not published under the auspices of any society, but the members of the Obstetrical Society, which has a chronic feud with the British Gynecological Society, are its principal backers. It may be remembered that two years ago the latter attempted to organize an International Gynecological Congress in London, but was unable to do so in consequence of a boycott by the members of the former society who alleged that the organizers of the Congress were not sufficiently "representative." Thus the promoters of the new journal include a large proportion of the most important names in British gynecology and obstetrics, and the need of a journal devoted to these subjects which is not the mere record of the proceedings of a single society is obvious. The chief editor is Mr. Alban Doran, Surgeon to the Samaritan Free Hospital, who combines distinct literary ability with his special gynecological knowledge. With him are associated a number of distinguished collaborators in all parts of the empire. He is to be congratulated on a very excellent first number. The object is to make the publication a complete and impartial record of British obstetrical and gynecological practice and a summary of contemporary thought and achievement in obstetrics and gynecology throughout the world. The annual subscription is 25 shillings, and the publishers are Balliere Tindall & Co., 8 Henrietta St., Covent Garden, London. The first number shows great premise. The place of honor is occupied by "An Analysis of 100 Cases of Uterine Fibro-Myoma," by Dr. Cullingworth, Obstetric Physician to St. Thomas' Hospital, London.

Gastro-Enterostomy for Severe Hematemesis.

At the Edinburgh Medico-Chirurgical Society Mr. Alexander Miles showed a patient after gastro-enterostomy for severe hematemesis. A woman, aged 42, was suddenly seized with severe hematemesis. Four years previously she had been treated for dyspepsia, and the stomach, which was dilated, had been frequently washed out. She had never vomited blood nor exhibited any of the ordinary signs of gastric ulcer. She regained normal health and remained well until September 8, when the hematemesis occurred. The usual methods of treatment were unsuccessful in arresting the bleeding which continued for three days. As life was endangered, operation was advised. On opening the abdomen by a mesial incision a densely indurated ulcer of about the size of a 5-shilling piece was found close to the pylorus. It extended to the lesser curvature and fully two-thirds of the way to the greater curvature. It was therefore impossible to invaginate it without great risk of occluding the pyloric orifice, and the condition of the patient did not justify an attempt to excise the ulcer. It was therefore decided to perform a posterior gastro-enterostomy. After opening the stomach its interior was explored with the finger. No definite bleeding-point was recognized in the ulcer. The communication between the stomach and the intestine was then completed with silk stitches. Before closing the abdomen about two pints of saline fluid were introduced into the peritoneum. During the first 24 hours after operation rectal injections of saline fluid were given every 4 hours and frequent nutrient enemata, which were all retained. The foot of the bed was raised. Although she continued to vomit bile-stained mucus at intervals there was no further loss of blood. Flatus was expelled in the evening. On the 12th she was better, though there was still sickness occasionally, but this became less frequent when the foot of the bed was lowered. On raising the head of the bed vomiting entirely ceased. On the 13th beef tea and peptonized milk were given per os. Recovery was uninterrupted.

Medical Treatment of Chronic Tuberculosis of the Intestine.

At the Clinical Society Mr. A. W. Mayo Robson read an important paper on this subject. He observed that whatever might be the views regarding the treatment of acute intestinal ulceration, surgical treatment is generally advisable in chronic intestinal tuberculosis. He related 7 cases (one male and six females) in which he had operated with only one death. In 2 cases the adhesions to adjoining parts were very intimate, in the others the affected parts of the bowel were quite free, thus rendering operative measures easy and simple. In 4 cases he employed his decalcified bone bobbin as a temporary splint over which to apply sutures. The physiological rest to the diseased parts secured by short-circuiting (as in one case) and by colotomy (as in another) seemed to answer so well that when the radical operation of excision involved serious difficulties or the patient was not in a condition to bear it he will not hesitate in future to be content with similar procédures and then to trust to general treatment and hygienic surroundings to assist in the cure. If in the future operative treatment be thought advisable in acute cases he anticipates that short-circuiting the diseased area will be found to be the more useful procedure, as it is the easier and safer, but experience alone will show whether the suggestions will prove of as much service in acute as they are in chronic cases. It is interesting that in 2 cases, in which tuberculous peritonitis coexisted with tuberculous ulceration of the intestine, the mere exploratory operation had not cured or even arrested the tuberculous process, but the radical operation of removing the principal focus of disease or the short-circuiting put a stop to the tuberculous peritonitis and, so far as could be seen, cured the more diffuse disease. All surgeons must have the experience of curing tuberculous peritonitis by simple abdominal section with or without drainage, and probably many of disappointment in cases in which the effusion had returned after a longer or shorter interval. He supposed that the explanation of these recurrent cases lay in the fact that the original focus of disease in the ovaries, Fallopian tubes, or bowel, had not been removed and again was the starting-point for a further effusion of the tubercle through the peritoneal cavity.

Correspondence.

Death from Chloroform Anesthesia.

MANITOWOC, WIS., Jan. 26, 1902.

To the Editor:—In reading over Dr. Bayard Holmes' paper on "A Report of a Death from Chloroform Anesthesia," I am surprised at the ungenerous stand the Doctor takes in regard to the anesthetizer. After stating, "It has been my practice to have a skilful person administer chloroform, even if it necessitated an untried and even inexperienced physician as my first assistant," he, a little further on, takes comfort in the fact that the anesthetizer in this case was a stranger to him and untried. Why should that fact soothe, rather than trouble, his conscience, since he neglected to follow his own rule? The anesthetizer being a stranger and untried does not prove him unskilful. Death from anesthesia may be due to improper administration, to an unfavorable condition of the patient, or to an unfortunate choice of the anesthetic. It has been proven again and again that ether narcosis is the safer, and chloroform is usually substituted because it is administered more quickly and pleasantly.

Physicians practicing in the smaller cities can not always call an expert anesthetizer to their aid, and they are obliged

to call on a brother physician, a student, a trained or untrained nurse or a layman to take his place. In emergency cases the anesthetic is often administered by the surgeon in charge, who at the same time is his own first and second assistant and trained nurse; and deaths from ether or chloroform are as rare in their practice as under the care of the trained anesthetizer and score of assistants in the large hospitals.

The best of men have lost cases from the anesthetic, yet they have not been censured unless it was proven that they were criminally careless. Why, then, in this case, where no carelessness has been shown, should the anesthetizer be given the blame, while the surgeon coolly excuses himself with the statement that that assistant was unknown and untried?

The Doctor evidently had not recovered from his agitation when he wrote that a physician who had once given ether should never be allowed to give chloroform afterwards.

Yours respectfully,

WM. G. KEMPER, M.D.

Appendectomy—Surgical History.

CINCINNATI, O., Jan. 24, 1902.

To the Editor:—Will you kindly publish the enclosed letter bearing on the subject of early operation in appendicitis, and oblige, Yours respectfully,

B. MERRILL RICKETTS, M.D.

"FT. WAYNE, IND., Jan. 21, 1902.

"Dr. B. Merrill Ricketts, Cincinnati, O.

"*Dear Doctor:*—The enclosed clipping from THE JOURNAL of the American Medical Association was sent me this morning by my son, Dr. George C. Stemen, of Denver. ["Appendectomy—Surgical History," Page 46, this Volume.] I had overlooked this in reading THE JOURNAL.

"In regard to my case, I will say that on April 22, 1887, I was called in consultation to see a man said to be suffering from general peritonitis and called "perityphlitis." There was every indication that the man would die, and I said that if he would consent, I would operate on him. He not only consented but requested that it be done. I made the operation and found a large quantity of pus and a necrosed appendix almost detached. I removed it and drained, and the patient is living today. You misunderstood me when I met you at Lima, as to it being 1884; it was 1887. The gentleman I operated on is A. B. Nickey, who lives at Princeton, Ind., and is in good health.

"I thank you for mentioning my case. I am not much concerned as to whether I made the first operation, but I certainly made one quite early in the history of this operation.

"Respectfully yours,

"C. B. STEMEN, M.D."

The A. M. A. as Basis of Reciprocity.

CHATTANOOGA, TENN., Jan. 21, 1902.

To the Editor:—I can not just at present go into a detailed consideration of defense of the proposition, but I wish to heartily endorse the suggestion made by Dr. Skelly in the last issue of THE JOURNAL, that membership in the American Medical Association be made the basis of reciprocity for license to practice between the various state examining boards.

With this as a foundation idea it seems to me that it is possible of elaboration so as to practically apply to this vexed question how to bar quacks and impostors, while at the same time recognizing intelligence, experience and probity towards license for practice throughout our common country, with as little of examination as may prove reasonable in compliance with laws as now existent or contemplated.

At some future date I may find opportunity for further argument on this point. At present I merely want to bring out further opinions upon the proposition, so that we may hear both sides of the question and ascertain how extensive may be the impulse to make this membership a basis for reciprocity, how practicable it is, what obstacles interpose, and how the examiners themselves receive the proposition. In a word let us "reason together" about the matter. Yours,

E. A. COBLEIGH, M.D.

Tetanus Following Vaccination.

PHILADELPHIA, PA., Jan. 21, 1902.

To the Editor:—I will be greatly obliged to any of your readers who may have had or know of cases of tetanus following vaccination, if they will communicate with me concerning them. I am engaged in a critical analysis of such cases in the hope of determining their etiology, and desire to secure all the data possible. Respectfully yours,

JOSEPH MCFARLAND, M.D.

Married.

GEORGE WESLEY BEATTY, M.D., of Brooklyn, N. Y., to Miss Caroline M. Steingester.

HARRY E. BURDETT, M.D., to Miss Nellie O'Gara, both of St. Paul, Minn., January 8.

HERBERT BACON, M.D., to Miss Mollie Prouse, both of Bloomville, Ohio, January 19.

DWIGHT CALKINS, M.D., Battle Creek, Mich., to Miss Marjory E. Ryder, of Pittsburg, Pa.

CHARLES E. CONGDON, M.D., to Miss Anna Ramsdell, both of Nashua, N. H., January 16.

JAMES H. DAVIS, M.D., Seyppel, Ark., to Miss Inus Bishop, of Belton, Texas, Dec. 23, 1901.

WILLIAM S. BEATY, M.D., to Miss Estelle Bonner, both of Vineyard, Ark., January 29.

WILMER ADAMS, M.D., Wye Mills, M.D., at Baltimore, to Miss Mamie R. Gould, January 15.

HENRY T. NORMENT, M.D., Anthoston, Ky., to Mrs. Virginia Norment, Henderson, Ky., January 16.

HERMAN S. SPEAR, M.D., New Portland, Me., to Miss Evelyn Conant, of South Strong, Maine, January 1.

FREDERICK PHINEAS DRAKE, M.D., London, Ont., to Miss Ada Kibbee Wright, of Port Huron, Mich., January 15.

WILLIAM N. MCARTNEY, M.D., Fort Covington, N. Y., to Miss Caroline Claghorn, assistant superintendent of the Lackawanna Hospital, Scranton, Pa., January 15.

Deaths and Obituaries.

Sylvester D. Bell, M.D. Western Reserve University, Cleveland, Ohio, 1874, formerly a practitioner of Butler, Pa., but for the past few years a resident of Arizona, a member of the Medical Society of the State of Pennsylvania and of the American Medical Association, died at his home in Tucson, January 14. He was a presidential elector in 1892, and had held several responsible territorial appointments.

Frederick Gundrum, M.D. Miami Medical College, Cincinnati, 1868, who had practiced for several years in Indiana, going thence to California on account of his health, died at his home in Riverside, January 13, from asthma complicating la grippe, after an illness of three days, aged 57. He was a member of the American Medical Association.

Kingston Goddard, M.D. University of Pennsylvania, Philadelphia, 1860, a contract surgeon in the Civil war, and thereafter for many years a practitioner of Philadelphia, coroner, and member of the Board of Education, who retired from active practice several years ago, died at the residence of his son in Philadelphia, January 18, aged 62.

James Farrington, M.D. New York University, 1847, one of the oldest physicians of Rochester, N. H., died at his home in that place, January 18, aged 80. He was a member of the Strafford District and New Hampshire State Medical societies and had served as a member of the legislature, of the constitutional convention and of the governor's council.

John Brownrigg, M.D. Jefferson Medical College, Philadelphia, 1851, formerly a surgeon in the Confederate service, one of the most prominent physicians of Mississippi, and a resident of Columbus, died January 21, at Mullanphy Hospital, St. Louis, where he had been under treatment for a long time, aged 72.

Warren Montgomery Sweetland, M.D. Rush Medical College, Chicago, 1848, for twenty-five years a resident and practitioner of Highland Park, Ill., who retired from active prac-

tice twelve years ago, died at his home, January 23, aged 82. He was a member of the American Medical Association.

Joseph Abell Baden, M.D. University of Maryland, Baltimore, 1856, a Confederate veteran and since the war a well-known physician of Calvert County and Baltimore, Md., died at his residence in that city, January 20, after an illness of one week, from heart disease, aged 68.

Harvey Parkhurst, M.D. University of Buffalo, N. Y., 1851, one of the oldest practitioners of McLean County, Ill., and a charter member of the County Medical Society, died at his home in Danvers, January 16, from heart failure, after an illness of only a few hours, aged 79.

William Merwin Smith, M.D. formerly health officer of the Port of New York, twice a member of the legislature, surgeon-general on the staff of General Dix and brigade surgeon during the Civil war, died at his home in Redlands, Cal., January 17, aged 75.

W. C. Brown, M.D. Rush Medical College, Chicago, for many years a practitioner of Geneseo, Ill., but more recently a resident of Sierra Madre, Cal., died at the Pasadena Hospital, January 12, from brain disease, after an illness of two weeks.

Peter R. Furbeck, M.D. Long Island College Hospital, Brooklyn, 1865, for many years a leading practitioner of Gloversville, N. Y., died at a sanatorium in Saratoga Springs, January 17, from Bright's disease, after a long illness.

Louis J. Archambeault, M.D. Laval University, Quebec, 1870, formerly a practitioner of Cohoes, N. Y., but for the last three years a resident of Brooklyn, died at his home in that city, January 12, after a brief illness, aged 54.

Harry Peters, M.D. University of Iowa, Iowa City, 1896, who commenced practice in Minden, Iowa, but moved to Davenport in 1900, died at his home in that city, January 16, from diabetes after a protracted illness, aged 30.

Charles Winston Spencer, M.D. Jefferson Medical College, Philadelphia, 1857, who practiced for more than 30 years at Plattsburg, Mo., died at Elvens, St. Francois County, Mo., January 6, after a brief illness, aged 67.

Prof. Emil Scheffer, a well-known chemist of Louisville, Ky., who discovered the formula for making liquid pepsin and also that for the preparation of dry or powdered pepsin, died, January 22, aged 80.

George M. Wellman, M.D. University of Georgetown, D. C., 1868, and since that time an esteemed practitioner of Dover Plains, N. Y., died at his home in that place, January 13, aged 65.

Harry D. Kline, M.D. Northwestern Ohio Medical College, Toledo, 1890, president of the King County (Wash.) Medical Society, died at his home in Seattle, January 19, from pneumonia.

Samuel O. Prall, M.D. University of Pennsylvania, Philadelphia, 1897, a practitioner of Easton, Pa., died at his home in that city, January 16, after a short illness, aged 30.

Augustus Hibler, M.D. University of Freiberg, Baden, 1852, one of the oldest physicians in Center County, Pa., died at his home in Bellefonte, January 16, aged 72.

William Wixom, M.D. Geneva (N. Y.) Medical College, 1846, a life-long resident of Italy Hill, N. Y., died at his home in that place, January 15, aged 83.

Henry E. Watkins, M.D., of Prince Edward County, Virginia, died at his home near Farmville, Va., January 16, after a long illness.

Eleazor Price, M.D. University of Buffalo, N. Y., 1855, an old resident of Jackson, Mich., died at his home in that place, January 18.

State Boards of Registration.

The North Carolina Board of Medical Examiners will hold its regular meeting in Wilmington, Thursday, May 29, at 12 m.

Minnesota Board of Medical Examiners.—This Board has issued the following notice: After January 1, 1902, applicants for license to practice medicine and surgery in the State of Minnesota must present evidence of having attended four full courses at a medical college recognized by the Minnesota State Board of Medical Examiners, of at least twenty-six weeks each, no two courses being in the same year. Graduates of medical colleges granting advanced standing for work done at other than medical colleges shall not be eligible to the examinations given by this Board. Provided, that above shall not apply to such students as have been granted advanced standing prior to September, 1901. By order of the Minnesota State Board of Medical Examiners, C. J. Ringnell, M.D., secretary.

North Dakota Examination.—The North Dakota Medical Examiners held their regular quarterly examination, January 7, at Grand Forks. The number of subjects examined in were 13; number of questions (?). Percentage required, 75. The number of applicants were 12, of whom 7 passed.

PASSED.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per-cent.
315	R.	Coll. of Phys. and Surg., Chicago	1892	82
316	R.	Hamline University, Minneapolis	1901	81
323	R.	Hamline University, Minneapolis	1900	81
317	R.	Indiana Medical College	1888	82
320	R.	Trinity Medical College, Toronto	1900	75
324	R.	University of New York	1887	78
325	R.	Victoria Medical College, Ontario	1876	75

FAILED.

318	R.	University of Kentucky	1894	72
319	R.	Kentucky School of Medicine	1901	50
321	R.	Louisville Medical College	1894	65
322	R.	Hamline University, Minneapolis	1901	65
326	R.	University of Iowa	1901	65

Minnesota Examination.—The Minnesota State Board of Medical Examiners held its regular quarterly examination at St. Paul, January 7, 8 and 9. The number of subjects examined in were 12; total number of questions (written), 90; required percentage, 75. There were 24 candidates, of whom the following 22 were successful:

PASSED.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per-cent.
1400	R.	Rush Medical College, Chicago	1900	85.4
1404	R.	Rush Medical College, Chicago	1901	90.1
1405	R.	Rush Medical College, Chicago	1901	80.2
1419	R.	Rush Medical College, Chicago	1902	89.5
1420	R.	Rush Medical College, Chicago	1897	75.2
1421	R.	Rush Medical College, Chicago	1901	83.3
1401	R.	Iowa State University	1901	79.6
1402	H.	Chicago Homeo. Medical College	1901	83.2
1403	R.	Baltimore Hosp. Med. Coll.	1901	82.9
1406	R.	Northwestern Med. College, Chicago	1900	75.4
1407	R.	Tufts Medical College	1900	83.3
1408	H.	University of Minnesota	1901	78.7
1409	H.	Boston Univ. School of Medicine	1901	86.7
1410	R.	Hamline University, Minneapolis	1900	75.2
1412	R.	Hamline University, Minneapolis	1901	75
1414	R.	Hamline University, Minneapolis	1901	75.7
1411	R.	Trinity Medical College, Toronto	1896	79
1416	R.	Trinity Medical College, Toronto	1899	79.2
1413	R.	Coll. of Phys. and Surg., Chicago	1888	75.8
1415	R.	Denver University	1901	75.4
1417	R.	Laval University, Montreal	1899	88
1418	R.	Harvard University	1895	95.1

FAILED.

1830	R.	Medical Dept. Univ. of Kentucky	1901	66.2
1850	R.	Non-Graduate, Hamline, University	....	71.5

Book Notices.

THE LIFE OF PASTEUR. By René Vallery-Radot. Translated from the French by Mrs. R. L. Devonshire. Vols. I and II. Cloth. Pp. 292 and 336 Respectively. Price, $7.50. New York: McClure, Phillips & Co. 1902.

This is more than a life of Pasteur—it is a history and a description of his work. But little space in the two volumes is devoted to his private life, yet enough to give us a good insight into the man as a husband, father and friend. It is written by his son-in-law and thus has the added value of being authentic and reliable. Pasteur's origin was a most humble one, his father being a tanner and not blessed with much of this world's goods. But he inherited a strong constitution, immense will-power, indomitable courage, and a determination that enabled him to overcome all obstacles when he set out to accomplish a purpose. Yet when he went to Paris at 15 years of age, with the *Ecole Normale* in view, and entered on his studies in Barbet's preparatory school, he became so homesick that it was necessary to send for his father to take him home. So for the time he resumed his studies, at a school nearer home, and his drawings —for at that time he made more promise of being a portrait painter than anything else. Considering his achievements in chemistry later on, it is interesting to read that in his examination before the Dijon Faculty in 1842 he was put down as *mediocre* in that branch. In the autumn of that year, when

he was 20, he again went to Paris and began a work, the result of which is known the world over. Step by step of that work is shown; details of his methods, so far as they could be understood by the lay reader, are given, and how that restless, determined genius saved to agriculturalists of his country millions of money. It tells how he reclaimed the silk, the wine and the stock industries of his native land; how for a time he was handicapped for want of material to work with and a place to work in, but how finally he was appreciated by his countrymen, who erected to him that noble memorial, the Pasteur Institute.

While written for the laity, this life will appeal especially to physicians, from the fact that it is a biography of the greatest scientific light of our age, a light that has illumined and opened the way to immense possibilities in medicine, in surgery and in biology. We wish the price were so low that the poorest member of our profession might obtain and read it, and especially that it could be put into the hands of every young man as he enters his medical career. If nothing more, it would be a stimulus to effort. This work and the "Life of Paget," which we noticed a few weeks ago, would make a magnificent foundation for a "working" library for any young man entering medicine.

GYNECOLOGICAL PATHOLOGY. A Manual of Microscopic Technique and Diagnosis in Gynecological Practice for Students and Physicians. By Dr. Carl Abel, Privat-Docent in Berlin. Translated and Edited by Samuel Wyllis Bandler, M.D., Adjunct Gynecologist to the Beth Israel Hospital, New York. With a chapter on the Embryology of the Female Genitalia and the Pathological Growths developing from Embryonal Structures. Illustrated by 100 engravings. New York: William Wood & Co. 1901.

OUTLINES OF GYNECOLOGICAL PATHOLOGY AND MORBID ANATOMY. By C. Hubert Roberts, M.D. Lond., F.R.C.S. Eng., M.R.C.P., Physician to the Samaritan Free Hospital for Women, Physician to Out-Patients, Queen Charlotte's Lying-in Hospital, Late Demonstrator of Midwifery and Diseases of Women, St. Bartholomew's Hospital. With 151 Illustrations, Mostly Original. Philadelphia: F. Blakiston's Son & Co. 1901.

Of these two books on practically the same subject the first contains 237 pages, the second 332, but the smaller type and larger page of the first make the two works of about the same extent. The general tendency of Abel-Bandler's book is to be a guide in microscopic technique and diagnosis in gynecologic practice. The fundamental value of the microscopic examination in the early diagnosis of many gynecologic conditions, but especially in carcinoma of uterus, is emphasized in the translator's introduction. In few diseases is an early diagnosis so important to the patient as in suspected carcinoma of the uterus and as the general practitioner commonly is the first called upon by the patient the responsibility rests upon him and he must make the test excision or test curettage. This illustrates well enough the general tendency of the book and the point of view from which the matter in it is presented. The portion on technique is sufficiently extensive and detailed to answer the purpose. The second part on diagnosis takes up the various organs concerned and, beginning with the normal anatomy of each organ, carefully describes the pathologic anatomy under the usual headings. Part III, added by Bandler, reviews the embryology of the female genitalia and gives a discussion of the pathologic growths that develop from them. This part is a valuable addition to the original work, as it brings together in one place a number of interesting facts that help one to understand the complex conditions encountered in this part of the body. The illustrations represent the actual microscopic appearances very well. The book has a distinct field in which it will be found of definite value to the student as well as the practitioner.

The chief object of Dr. Robert's work is to present "as simply as possible the morbid processes to which the female organs are subject." The author has endeavored to give the more modern views of British pathologists. References to both British and foreign authors are plentiful, and occur at the bottom of the pages. Numerous original illustrations have been introduced, and in each case the place where the original specimen may be found is stated, a feature of much value to students of medicine frequenting the hospitals in the museums of which the specimens are preserved. The greater number of the illustrations, which are placed upon separate leaves throughout the body of the work, represent the gross appearances of pathological specimens and the method of reproduction is quite successful. The book is not strictly confined to the pathological anatomy of the female genitalia; a certain amount of clinical material is introduced, e. g., vaginismus, menstruation and its disorders, sterility. The diseases of the bladder, urethra, and uterus are also presented. The last chapter deals with micro-organisms in relation to diseases of women. In this chapter is discussed also the question: "Is there a parasite of cancer?" It seems to us that a better arrangement might have been desired, and that etiology and pathological anatomy are best discussed together. The general arrangement of the material in Gebhard's book, for instance, seems to us to present certain natural advantages, at least in some respects. The information conveyed in the last chapter in regard to ordinary pathogenic organisms is decidedly elementary, but at the same time there is not enough of it to be of any real service to the student who naturally is supposed to be well grounded in the principles of general pathology and bacteriology before he takes up the special study of gynecologic pathology. The discussion of tumors is not altogether satisfactory because "adenoma malignum" is separated from carcinoma, to which it belongs, and because "deciduoma malignum" is classed definitely with sarcoma. The differences of opinion concerning the nature of "deciduoma" is well shown by the list of names proposed for it: Abel gives no less than fourteen. The statement concerning this interesting tumor, or group of tumors, in either of these works is not quite as exhaustive and critical as one would be likely to look for in works of this kind. The treatment of ovarian teratomas or embryomas by Roberts is also disappointing as they are not clearly described and no detailed reference is made to the recent interesting studies of this class of tumors by Wilms and others. The statements in regard to the theories of the origin of the dermoid cysts and teratomas are very meager. In the index there is no reference to actinomycosis of the female genitals nor to certain rare but interesting metaplastic changes in the uterine epithelium, at least not under the ordinary headings.

The attention given to illustrations of gross pathological specimens is probably the chief distinguishing feature of Robert's book; but it is lacking in real grasp and critical discussion of questions of fundamental importance in gynecological pathology, and it does not aim to be a guide to technical work.

Miscellany.

Asbestos Dishes for Consumptives.—F. Kornfeld, of Vienna, exhibited at the local medical society, December 6, a number of articles made for the use of consumptives out of asbestos: cuspidors, dishes, etc. They can be sterilized without injury by putting them in the fire, and can be made at a trifling expense.

Spontaneous Expulsion of a Fibroma in Esophagus.—Sarkisoff relates in a recent issue of *Vratch* that a woman 27 years of age had experienced pain when swallowing, with some difficulty in breathing, and became fatigued easily. These symptoms continued for two years when she suddenly coughed up a fibroma 4 cm. long by 2 wide and .5 thick.

New Complete Edition of Galen's Works.—The Berlin and the Copenhagen Academy of Sciences have commenced the task of collecting all the manuscript left by Galen and compiling a new and complete edition of his works. The committee in charge, the "corpus veterum medicorum," expects to reap a rich harvest for philology and the history of medicine.

Reposition of Prolapsed Umbilical Cord.—H. Henne writes to the *Corr. f. Schweiz. Aerzte*, of December 1, describing a case of prolapse of the cord in which the placenta was attached unusually low, while the cord was exceptionally long—fully 130 cm. All attempts to reduce it proved unavailing until he applied a gauze compress and pushed the cord and fetal head back into the uterus, leaving the compress in the uterine cavity to protect against further prolapse. Labor and delivery proceeded normally and the compress was expelled with the afterbirth.

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Souvenir Medallion for Fournier.—Professor Fournier retires from the clinical chair in the Hopital Saint-Louis, Paris, at the close of the current scholastic year. His friends are soliciting subscriptions for the purpose of presenting him with a medallion to be designed and executed by Chaplain. A subscription of twenty-five francs forwarded to the treasurer of the fund, M. Rueff, 106 Boulevard Saint-Germain, Paris, entitles the subscriber to a copy of the medallion.

Absorption of Food by the Intestines.—Experiments with cooked, chopped and salted thymus gland administered by rectal injection, showed much greater absorbing power on the part of the intestines than they are usually credited with. A much larger proportion of uric acid and phosphates and also nitrogen, was excreted in the urine during the period of the tests. This was accepted by Mochizucki—who describes his research in the *Archiv f. Verdauungskr.* vii, 3—as evidence that the albuminoids and proteids in the enema must have been absorbed to a considerable extent.

Pneumaturia.—Wildbolz describes a case of pneumaturia, the last portion of the urine accompanied by air rushing out of the urethra. There was no pain, merely a slight tickling in the urethra. The patient was a man of 52. For the last few months he had felt weak, with headache and slight vertigo at times. There was no sugar in the urine, but 1.5 per 1000 of albumin. Wildbolz succeeded in isolating from the urine the bacterium lactis aerogenes, and established that this bacterium generates an odorless gas in the presence of albumin. All the symptoms disappeared when the patient was put on a nephritis diet and the albuminuria had vanished.

Prophylaxis of Syphilis in France.—The minister of the War Department of France has ordered that one of the lectures on hygiene delivered regularly by the medical officers to the officers and non-commissioned officers of the troops, shall be on the subject of the dangers of syphilis and the means of combating them. Young soldiers who conceal their infection are to be punished. The department of the interior has also taken up the matter and Waldeck-Rousseau has appointed a committee to study the various questions in regard to the prophylaxis of syphilis and venereal diseases. It includes fourteen physicians, Brouardel, Roux of the Institut Pasteur, several who are members of the legislature, officials on boards of health and hospital management, and the prefect of police, with Professor Fournier as the chairman of the committee.

Physicians Who Oppose Vaccination.—The recent occurrence of smallpox in the families of a number of physicians who oppose vaccination is a most serious matter. It is said that "vaccination by the mouth," or "by the stomach," is the method advised by them. Such phrases, according to science, betray an obstinacy that is worthy of punishment. We can find some excuse for layfolk, wholly ignorant of physiology, history and statistics, who oppose vaccination, but in physicians there is no excuse whatever. The testimony as to the value of vaccination is so overwhelming that those who do not admit it have no right to pass from the sick-room of patients with highly infectious diseases and scatter the germs among the people. Such physicians should be quarantined with their patients. Argument will have no effect upon such minds, and the swift punishment of their delusions by the occurrence of smallpox in themselves or in their families will have no influence upon their views or in their advice to their patients. In the name of medicine, to oppose the best established medical truth, and, in the name of therapeutics, to scatter disease is an outrage upon the community.—*American Medicine.*

Permanently Cured Case of Ichthyosis.—Bockhart has made many attempts to cure ichthyosis but has never found the patient persevering enough to accomplish a permanent cure except in the one case described. This was the 8-year-old daughter of well-to-do parents, who patiently for nine years rubbed her with sulphur salve three times a day. She was educated at home on account of the odor of the sulphur, and is now a young woman, who for nearly six years has been entirely free from the ichthyosis, which at first extended over the entire body, except the head, face, joints, soles and palms. After a warm bath with soap in the morning a 5 per cent. sulphur salve was rubbed and massaged into the skin, and again at noon and night. Cod-liver oil was given internally, and twice a year for six weeks Kreuznach salts were added to her bath water. After three years the cure seemed to be complete and treatment was suspended for three months when recurrence was evident. After three years more, the child remained healthy for six months before the recurrence appeared. Treatment was resumed for another three years, since which time she has been permanently cured. In his communication to the *Monatssch. f. Prakt. Derm.* of December 15, Bockhart states that ichthyosis in adults is more rebellious than in the young.

Teach Students the Importance of Organization.—Dr. J. C. M. Floyd, of Steubenville, in a letter makes the suggestion that medical students should from time to time during their course of study be instructed as to the value to themselves of joining a medical society as soon as they enter upon practice. This is a matter worth some attention from medical teachers. It would not be difficult for every teacher to find at least one opportunity in a few words to point out to his classes the advantages to physicians of medical society membership. The utilitarian side of the matter, in that a live medical society constitutes a means for the ambitious young physician further to pursue his search for medical knowledge, needs few words to bring conviction to the student's mind. The value of friendly association in reducing the friction that often arises between men in active practice also is readily demonstrable. Then a few words might very profitably be devoted to stating the duty that medicine owes to the public to initiate measures directed to reducing the amount of preventable disease. There are some medical teachers who have followed this plan, but they are the exceptions. It is hoped that many others will by this suggestion be led to find an opportunity for directing the attention of their students to the benefits of medical organization.—*Cleveland Journal of Medicine*, Dec., 1901.

Frequency of Embolism in Heart Disease.—Ginsburg reports in the *Deutsche Arch. f. Klin. Med.*, lxix, 5 and 6, that he found in looking over the records of 250 autopsies of heart disease, that embolism had been noted in 85 cases, usually in the kidneys. Both kidneys were affected in 41 out of 62 cases. The clinical symptoms had not been severe: only hematuria in 4; albuminuria in 26 and tube casts in 5. Embolism of the spleen was noticed in 23, and it occurred without symptoms in 14, with tumefaction in 9. Two of the latter had complained of sudden, violent pains in the region of the spleen. In 15 cases the embolism was in the brain. It occurred suddenly in 9 without premonitory symptoms of disturbed compensation. One patient survived three years, 5 from ten to forty-five days, and 9 died at once. In 9 of these cases the heart affection was a mitral endocarditis, in 2 an affection of the semilunar valves, in 2 myocarditis with thrombosis of the left ventricle and in 2 a lesion of both mitral and semilunar valves. In one of 3 cases of embolism of the celiac trunk, hematemesis and bloody stools had been noted but no pain; in another there were violent pains in the abdomen and meteorism but no vomiting nor diarrhea. In the third, no symptoms suggested the celiac lesion.

Revocation of Licenses to Practice Medicine.—We should endeavor to shunt the rage of the antis upon the lawyers. At present the medical profession is the object of the most violent hatred of the hordes of quacks and medical anarchists, on the ground that medical men are forming a trades union. It is the wildest bit of silliness imaginable, and yet it dictates pernicious legislation and prevents medical progress in a thousand ways. Why do we lie under the imputation and find ourselves made to prove that the antis lie all about it? Simply because of our lack of professional *esprit de corps* and organization. Are the lawyers so foolish? By no means! Who ever heard of a doctor having his license revoked, no matter what egregious professional crimes he had committed? We allow every wretch who has ever stolen the degree of M.D. to retain it, although every word he writes or utters is loaded with venom against us, and destructive of every principle of medical decency and progress. What provision or machinery does there exist in the state laws for expelling a physician playing scamp? Do

medical societies turn him out? In every state lawyers who have disgraced their profession are disbarred, and yet the antis do not rail at the legal profession as a trades union. Last year in Colorado 13 lawyers were disbarred; have 13 doctors ever had their licenses revoked in the whole United States in our entire history?—*American Medicine.*

Physiologic Effects of Spinal Cocainization and Lumbar Puncture.—Pitres and Abadie describe the physiology of spinal cocainization as studied in detail on fifty patients and reported in the *Archives de Neurologie*, xii, 70. They attribute the analgesia to the action of the cocain in modifying the conductibility of the sensory roots, not to any action on the cord itself. They found that reflexes previously normal were exaggerated, while exaggerated or weak reflexes were abolished. Two-thirds of the patients had trembling of the feet or knees, and in a few hysterics the tremor was general. The patients were always able to stand erect, free from ataxia, but walking was occasionally difficult, as their legs felt heavy, they said. The skin did not alter its color over the area of analgesia; pricking did not bring blood and even a sinapism caused no sensation of heat nor redness, while the same sinapism applied outside of the area of analgesia always induced the usual reaction. The skin remained dry and could thus be sharply defined from the sweating skin beyond the area of analgesia. Study of the physiologic effects of lumbar puncture on fifteen other patients showed that the headache occasionally observed after spinal cocainization is probably due merely to the puncture, and not to any toxic action of the drug, as it was a constant accompaniment of lumbar puncture, identical in appearance, localization, duration, intensity, etc., with that which follows spinal cocainization. None of the other symptoms were noted after lumbar puncture; nausea and vomiting were the rare exception.

The Osteopathy Bill.—There is a bill before the [New York] Legislature intended to license so-called osteopathists to practice medicine, treat contagious diseases, sign death certificates, etc. Such a bill naturally breaks down all the barriers in process of erection for scores of years to safeguard the people against malpractice, to protect the sick from the sort of vampires bred in new countries where the laws regulating the practice of medicine are apt to be liberal, not to say loose. New York, after decades of hard work on the part of philanthropists, medical, legal and other, has secured a code of laws regulating the practice of medicine in the rigid and impartial manner which has been found to be the best by a slow process of evolution in older countries. The law simply requires in the applicant for a license to practice a certain standard of education in the different branches of science with which medicine and surgery are concerned, in order that the public may be protected from the kinds of malefactors who in the absence of such wise legal provision would prey upon the sick. This standard of education is within the reach of any one. No one is debarred from acquiring sufficient knowledge to pass the examinations. The "regular" physicians must pass them. The homeopathists pass them. The "eclectics" pass them. If the so-called osteopathists pass them, they also would be equally privileged to practice. But what they desire is the right to practice medicine without passing any examination, without demonstrating, as all others of whatever school are required to do, their fitness to undertake the healing art. It would be just as fitting and proper that the practitioner of massage should have a law of this kind framed for him, for the masseur is usually extremely well versed in some of the principles underlying medicine. He is well acquainted with anatomy and physiology. The fact is that osteopathy is only a rudimentary form of massage. The word means bone-cure and the osteopathist tells his patient that a small bone in the head or spine is out of place and he will pummel it into place at $100 per month. It is a passing fad. In twenty years it will be laughed at along with the imbecilities of the Perkins tractors. Let the osteopath practice along with the masseur and the midwife and the nurse, but do not throw open the doors to the practice of the entire healing art.—*N. Y. Sun*, Jan. 21, 1902.

Massage and Osteopathy.—The founding of a special school of medical practice called osteopathy directs attention anew to the value of manipulation in the treatment of certain diseased conditions. Some have described osteopathy as a highly scientific massage; but the ordinary rubbing, kneading, and tapping prescribed in the works on massage and practiced by masseurs are very different things from the manipulations of the osteopaths. The latter are based upon the anatomical structures to be treated; sufficient force is employed to affect the deeper tissues. In improving the circulation, relieving pain, and absorbing inflammatory exudates by manipulation, the average osteopath is capable of teaching the profession valuable lessons. Of course, the foundation of a school of medicine upon such a narrow therapeutic resource will ultimately bring the whole movement into discredit, and perhaps a valuable method of treatment in a certain class of cases may fall into disuse. Had osteopathy confined itself to a legitimate application of its methods, and not attempted such absurdities as the "reduction" of typhoid fever by pressing upon the seventh cervical vertebra, it would probably have left a valuable impression upon the practice of medicine. Its fallacies will sink whatever is of good in the method. In Japan the blind are trained in massage. In Leipsic a number of blind people have been trained to the occupation. The massage that is taught is the ordinary rubbing and kneading and stroking with which most bath attendants are familiar. It is useful in general neurasthenic states and where a general improvement in the nutrition of the tissues is sought, or as a form of passive exercise in patients who are inactive. Such massage differs from manipulations based upon a careful appreciation of the anatomic elements involved in the structures which are treated, and knowledge of the vascular and lymph channels. It is unfortunate as well for the laity as for the profession that such manipulative methods have ever been allowed to pass into the hands of empirics. In Austria massage by the laity has been discouraged; it is in the hands of medical students and young medical men. In some way physicians have thought that such manipulations were beneath the dignity of the profession. This must be a relic of the time when the operation for stone was considered one that a surgeon should never perform. No one is so competent to deal with the adhesions in a joint and inflammatory exudates in the pelvis as physicians themselves. Indeed, there are many reasons for thinking that the physician alone is competent, as he is able to appreciate such dangerous infections as tuberculosis, which might be aggravated by manipulation. Massage and manipulative measures generally should be restricted to the profession. The older members whose time is too fully occupied to give the personal attention required in these cases should enlist the younger members of the profession in the work. When the profession fully awakens to its responsibility in this respect, much of the quackery which now flourishes will find itself relegated to the rear.—*Medicine.*

Societies.

Society of Physicians and Surgeons of Louisville.—At the annual banquet, held January 16, Dr. Charles W. Hibbitt was elected president, and Dr. S. J. Myers, secretary.

Platte County (Neb.) Medical Society.—This Society was organized at Columbus, January 20, with Dr. Harry J. Arnold president, and Dr. Berthold Tiesing, secretary. The first annual meeting will be held February 12.

Springfield (Mo.) Medical Society.—At the annual meeting of this Society, Dr. Leander Cox was elected president; Dr. William M. Smith, vice-president; Dr. John R. Boyd, secretary, and Dr. Dexter B. Farnsworth, treasurer.

Passaic (N. J.) Medical Society.—At the annual meeting of this Society, January 9, Dr. Robert R. Armstrong was elected president; Dr. John J. Sullivan, vice-president; Dr. Frank M. Stagg, secretary, and Dr. Hiram Williams, treasurer.

Medical Association of Troy (N. Y.).—This Association met, January 7, and elected Dr. John W. Morris, Troy, president; Dr. Thomas C. Church, Valley Falls, vice-president, and Dr. Edward W. Becker, Troy, secretary and treasurer.

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Talladega County (Ala.) Medical Society.—At the annual meeting of this Society held in Talladega, January 7, Dr. Jason S. McCants, Talladega, was elected president; Dr. Albert C. Sims, Renfroe, vice-president, and Dr. William G. Harrison, secretary.

Riverside County (Cal.) Medical Society.—At the quarterly meeting of this Society held at Riverside, January 14, Dr. Louise Harvey Clarke was elected president; Dr. Samuel Outwater, vice president, and Dr. Charles W. Girdlestone, secretary, all of Riverside.

Rensselaer County (N. Y.) Medical Association.—At its annual meeting held in Troy, January 7, Dr. Charles S. Allen, Rensselaer, was re-elected president; Dr. Thomas C. Church, Valley Falls, vice-president, and Dr. Frederick A. Smith, Troy, secretary and treasurer.

Pettis County (Mo.) Medical Society.—At the meeting of this Society, January 6, at Sedalia, Dr. William G. Cowan was elected president; Dr. Everett A. Wood, vice-president; Dr. Emory F. Gresham, secretary, and Dr. William H. Evans, treasurer, all of Sedalia.

Summit County (Ohio) Medical Society.—On January 15 this Society elected and installed the following officers: Dr. Charles E. Held, president; Dr. L. B. Humphrey, vice-president; Dr. Edward A. Montenyohl, secretary, and Dr. Charles E. Norris, treasurer, all of Akron.

Nevada State Medical Society.—This Society met in Reno, January 6. Dr. Anthony Huffaker, Carson, was elected president; Dr. Pinninger, Floriston, vice-president, and Dr. A. E. Hershiser, Reno, secretary and treasurer. The next meeting will be held in Virginia City, July 7.

Pawtucket (R. I.) Medical Society.—This Society held its first annual meeting and banquet, January 7, at which Dr. William H. Heimer, Pawtucket, was elected president; Dr. Thomas H. McNally, Central Falls, vice-president; Dr. Joseph Duxbury, secretary, and Dr. Forrest Badger, treasurer.

Olmsted County (Minn.) Medical Association.—At the annual meeting of this body held in Rochester, January 13, the following officers were elected: Dr. John G. Cross, Rochester, president; Drs. Oscar C. Heyerdale, Rochester, and R. H. Russell, vice-presidents, and Dr. H. Speier, treasurer.

Philadelphia Academy of Surgeons.—At a recent meeting of the Academy the following officers were elected: Dr. Richard H. Harte, president; Drs. Henry R. Wharton and John B. Deaver, vice-presidents; Dr. William J. Taylor, secretary; Dr. William G. Porter, treasurer, and Dr. John H. Gibbon, recorder.

Clark County (Ohio) Medical Society and the Academy of Medicine held a joint meeting, at Springfield, January 15, over 50 being present, the object being to combine for more effective work and in accord with the plan recommended by the American Medical Association. A banquet followed the scientific work.

Mahoning County (Ohio) Medical Society.—At the annual meeting of this Society, held in Youngstown, January 7, Dr. Carlos C. Booth was elected president; Dr. John S. Zimmermann, vice-president; Dr. Charles D. Hauser, secretary; Dr. Jared E. Cone, treasurer, and Dr. George S. Peck, librarian, all of Youngstown.

Savannah (Ga.) Medical Society.—At the annual meeting of this Society, held January 15, Dr. Ralston Lattimore was elected president; Dr. Marion X. Corbin, vice-president; Dr. Ralph M. Thomson, recording secretary; Dr. George R. White, treasurer; Dr. J. Lawton Hiers, corresponding secretary, and Dr. Elton S. Osborne, librarian.

Milwaukee (Wis.) Medical Society.—This Society held its annual meeting, January 14, at which the following officers were elected: Dr. G. Frederick Shimonek, president; Drs. Carl Zimmermann and John W. Coon, vice-presidents; Dr. Arthur T. Holbrook, secretary; Dr. Wianus O. B. Wingate, treasurer; Dr. Louis F. Frank, librarian, and Dr. John M. Beffel, curator.

Omaha (Neb.) Medical Society.—This Society, at its annual meeting January 14, elected the following officers for 1902: President, Dr. Frank E. Coulter; vice-presidents, Drs. Joseph C. Moore and H. P. Hamilton; secretary, Dr. Joseph M. Aiken; treasurer, Dr. Millard Langfeld, and censors, Drs. Harry M. McClanahan, Benjamin F. Crummer and Andrew B. Somers. The Society has a membership of 79.

Medical Club of Philadelphia.—This Club held its tenth annual meeting January 17, at the Hotel Bellevue. Dr. E. L. Duer was reëlected president and other officers elected were: Vice-presidents, Drs. Thomas H. Fenlon and A. McAllister; secretary, Dr. Guy Ilinsdale; and treasurer, Dr. F. Savary Pearce. The club is purely for social purposes, has 365 members and a sinking fund of more than $5000. It is the purpose to build a club house.

Washington (D. C.) Medical Society.—At the meeting of the Society held January 15, Dr. A. F. A. King read the essay of the evening, entitled "A New Factor in the Etiology and Treatment of Malarial Fever: Destruction of the Parasite by the Ultra-Violet Rays of Fluorescent Light." Dr. King demonstrated his theory and gave the results of his personal experiments. The discussion of the paper will be taken up at the next weekly meeting of the Society.

Nashua (N. H.) Medical Association.—On January 8, this Association held its annual meeting at which a valuable Morris chair was presented to Dr. Alonzo S. Wallace, who had granted the use of his office as a meeting-place for several years; resolutions regarding the late Dr. Royal B. Prescott were adopted and the following officers were elected: Dr. George F. Wilber, president; Drs. Sam S. Dearborn and August Guertin, vice-presidents; Dr. Ella Blaylock-Atherton, secretary, and Dr. Charles E. Congdon, treasurer.

Orange County (N. Y.) Medical Association.—This Association held its annual meeting at Middletown January 15, at which the following officers were elected: Dr. Milton C. Conner, Middletown, president; Dr. Frank W. Dennis, Unionville, vice-president; Dr. Charles I. Reidfield, Middletown, secretary and treasurer; Dr. Edward D. Woodhull, Monroe, delegate to the American Medical Association; Dr. Charles E. Townsend, Newburgh, alternate, and Dr. William E. Douglas, Middletown, member of the council of the New York State Medical Association.

Washington (D. C.) Obstetrical and Gynecological Society.—At the semi-monthly meeting of the Society, held January 17, Dr. Joseph Tabor Johnson read the essay of the evening, entitled "Choice of Operation for Retro-displacements of the Uterus." Dr. Johnson presented the subject in its entirety and up to date, and the paper was fully discussed by the members. Dr. Stone reported a case of calculus lodged in the right ureter of a woman which was removed by abdominal section. Previous to the operation the diagnosis of appendicitis was made. The patient made an uneventful recovery. He exhibited the calculus, and an interesting discussion followed.

State Sanitary Association (Minn.)—The state sanitary conference which met, January 15, at St. Paul, effected a permanent organization with Dr. Henry M. Bracken, St. Paul, president; Drs. John M. Robinson, Duluth; Alfred E. Spaulding, Luverne, and J. J. Flatten, State University, vice-presidents, and Dr. Emery H. Bayley, Lake City, secretary. The conference discussed diphtheria, smallpox and rabies and passed resolutions recommending the establishment of a national department of health with a cabinet officer at its head.

Philadelphia County Medical Society.—On January 15, this Society held its annual business meeting. The Society has now 790 members, 7 having died within the year. The balloting resulted in the election of 36 new members; in the naming of 150 delegates to the Medical Society of the State of Pennsylvania; and in the election of the following officers: President, Dr. Thomas H. Fenton; vice-presidents, Drs. Francis M. Perkins, and J. Chalmers Da Costa; secretary, Dr. Ellwood R. Kirby; assistant secretary, Dr. William S. Ray; treasurer, Dr. Collier L. Bower, and censor, Dr. W. Joseph Hearn. The Society unanimously adopted the following resolutions:

"WHEREAS, Smallpox is continuing to spread among the people of the city; and

"WHEREAS, Sensational newspaper articles minimizing the importance of vaccination have caused a number of people to refuse the vaccination offered by the city physicians; and

"WHEREAS, Of the 977 cases of smallpox admitted to the Municipal Hospital during 1901 there was not a single patient who had been successfully vaccinated within a period of four years, those afflicted being almost exclusively unvaccinated persons or adults not vaccinated since infancy; therefore, be it

"*Resolved*, By the Philadelphia County Medical Society, representing the physicians of the city and county, That this Society deems it necessary to impress upon the community that universal vaccination is the most effective means of stamping out smallpox, and that, although fumigation and disinfection are valuable adjuncts, they can by no possibility do away with the necessity for vaccination since smallpox patients are the most important carriers of infection, and such infection can not be influenced by the disinfection of smallpox. Be it further

"*Resolved*, That publications which slur the importance of vaccination despite the incontrovertible testimony of 100 years are to be deprecated as contrary to the best interests of the community. Such articles are known to have dissuaded people from vaccination who have subsequently died of smallpox."

CHICAGO LARYNGOLOGICAL AND CLIMATOLOGICAL SOCIETY.

Regular Meeting, held Nov. 19, 1901.

President, Dr. William E. Casselberry, in the Chair.

Secondary Hemorrhage Following Tonsillotomy.

DR. HOMER M. THOMAS read a paper on the above subject. He said: I never perform a tonsillotomy with the tonsillotome without grave forebodings of secondary hemorrhage. When I began professional work nineteen years ago, this fear was not in my mind, and for several years I had no cases in which there was more than slight hemorrhage following the excision of the tonsils with the tonsillotome. Later on, however, and at very unexpected intervals, I have had hemorrhage occur in cases where there appeared to be no indications of the possibility of hemorrhage. The case I wish to present to-night occurred in my practice recently, and was quite a surprise. The young lady, Miss S., aged 18, had been referred to me for the excision of two hypertrophied tonsils, moderately large, by her family physician. One of the young lady's friends had her tonsils removed with a tonsillotome about six months before, and had suffered from considerable hemorrhage. This so alarmed my patient that she asked me to use every possible precaution to avoid such an occurrence in her case. In view of the circumstances, I was particularly anxious that the operation be a success, and adopted what I considered very great precautions, but they were futile. The right tonsil was removed at about 10 a. m. on Monday with a Mattinich tonsillotome. The line of excision came at about the pillar of the fauces. There was no hemorrhage of any moment, but the young lady was kept under observation for several hours, no hemorrhage occurring. She went home, and on the following Wednesday she returned and the left tonsil was removed. The interval was allowed in order that a firm clot might form in the right tonsil, and prevent hemorrhage. No difficulties were encountered, the excision was easily made, and the patient remained in the office for several hours before returning home. On the following morning, at about five o'clock, I was telephoned that the throat was bleeding severely. I suggested ice and astringents, and supposed that would be the end of the matter. The bleeding increased, however, and about 10 that morning I went to the patient's residence, expecting to find a secondary hemorrhage from the tonsil operated on the day before. On my arrival I was surprised to find a severe hemorrhage from the right tonsil, about 65 or 70 hours after the excision of the tonsil. The clot, which had become detached, was saved, and I found it ragged and undergoing some disintegration. A local application of tannic and gallic acids temporarily checked the bleeding, but the clot was expelled by coughing, and the bleeding recurred. I then applied a saturated solution of ferropyrin, which temporarily controlled the bleeding. The spurting was synchronous with the heart action. I was unable, however, to control the hemorrhage with any styptic, and I finally resorted to the use of the Lentz mouth-gag, leaving it in position for two hours, when the hemorrhage ceased.

DR. HENRY GRADLE, in discussion said: I can report an instance of secondary hemorrhage following a tonsillotomy made with the snare. A gentleman about 30, perfectly healthy, had hypertrophic conditions in the pharynx and nose, attended with considerable deafness and moderately large tonsils. Both tonsils were cut off smoothly with a hot snare. On the third night following, he came to me bleeding very freely, not an arterial hemorrhage, but a venous oozing. It continued for a number of hours, and was finally controlled by antipyrin and tannin. Hemorrhage again set in the next day, but was very trifling. The bleeding was due to an ulcerated condition.

DR. OTTO T. FREER—It seems to me that primary or secondary hemorrhage is apt to follow any method of operation for removal of the tonsils. I recall a serious case of secondary tonsillar hemorrhage succeeding excision of a buried tonsil by cautery dissection. When I saw the case the bleeding had lasted from 2 a. m. to 10 a. m. and attempts had been made to check it with iron perchlorid. Packing of the recess created by the tonsillotomy between the pillars with cotton and tannic acid powder stopped the bleeding. The exsanguinated state of the patient had much to do with the cessation of hemorrhage, and I think that this stops often of its own accord when syncope is imminent and the last remedy applied is supposed to have done the work performed by the lowered blood pressure. Where tonsillotomy is done through the substance of the tonsil, hemorrhage is more apt to occur than if the tonsil be removed from its base, as the tonsillar substance, especially if hard and fibrous, prevents retraction of the arteries, while this takes place normally in the cellular tissue behind the tonsil if that structure be completely removed. It is for this reason that I advocate Ingals' operation for écrasement of the tonsil as the Ingals' tonsil forceps lifts it from its bed after separation of the anterior pillar with a blunt hook and the steel wire snare passes under the tonsil, enucleating it completely. In all the many tonsillectomies done through many years in the clinics at Rush Medical College there has never occurred a serious hemorrhage after the use of the cold wire snare employed after the method of Ingals. I admit that this does not prove that the method is faultless as regards danger of hemorrhage, as bleeding of a severe nature very rarely occurs where the tonsils are removed in childhood and the snare operation is practically limited to children in our clinics; still I think the method deserves some credit for the entire absence of serious hemorrhage in so many years. For controlling tonsillar hemorrhage I have found among the simpler means powdered tannic acid the best, packed well into the tonsillar recess with a cotton plug if this can be done.

DR. WILLIAM L. BALLENGER—Dr. Freer has just referred to the use of the cold steel wire snare as a good method for removing tonsils. I have used this method a number of times within the last year, but the results were so bad in a few instances that I do not believe that it is the best method of procedure in all cases. I have had three violent inflammatory reactions following the use of the cold steel wire snare. I had one patient who was laid up for nearly two weeks on acount of the violent reaction and infection. That may have been my fault and not the fault of the snare, although the usual precautions were taken before and after operating.

I have also had severe hemorrhages with this method, although none of them were secondary. I was led to use it in the belief that a bloodless operation would result. I have used Peter's snare, a powerful instrument, and have had considerable hemorrhage follow its use. Another difficulty is the breaking of the wire. Only last week I had to put in four wires to remove one tonsil; rather an embarrassing procedure. This, however, is the fault of the instrument and can be remedied. As Dr. Casselberry has so well said, there is no operation on the tonsils which is not at times attended or followed by hemorrhage. This is especially true of adult cases in whom the tonsils have become hyperplastic.

DR. J. HOLINGER—I have for several years used the method of Killian, as described in the *Archiv f. Laryngologie* a few years ago. The tonsils which always make trouble are those having very large and deep crypts. Killian places a broad hook in the angle of the mouth opposite the tonsils to be examined. He then examines the tonsil with a strabismus hook. He enters from the hilus of the tonsil down into the crypts, looking for the deepest crypts as they are most liable to cause trouble. He then enters the crypts with a bent knife, and slits them open. The crypts are then painted with hydrochloric acid, and they remain open, the tonsil shrinking. The advantages are manifold. I never have seen a secondary hemorrhage. All the cases I have treated in that way got well quick without any trouble. In cutting the tonsil with a tonsillotome, it is possible that you do not cut the whole depth of the crypt, and leave a pocket. When the wound heals the contracting scar tissue closes that little pocket, and there is a worse condition than before. The hilus of the tonsil is that part where all the crypts open. It is between the upper and middle third of the tonsil, quite high up.

DR. NORVAL H. PIERCE—I have used Killian's method, and had very severe hemorrhage follow. A very healthy gentleman came to me with an embedded tonsil. I explored the supratonsillar fossa, and found a very deep crypt running apparently posterior to the tonsil. I slit it up and painted it

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with nitrate of silver. About six hours afterward I was called to my patient's house. I found him nearly exsanguinated. He was bleeding profusely from the cut I had made. I dressed the wound with cotton and ferropyrin—the powder not a solution. A pledget of cotton was rubbed into the powder and then packed in the bleeding cavity.

DR. J. HOLINGER—The superior fossa does not belong to the tonsil. Its walls are not tonsillar tissue. It is a pouch that stays open from embryonal life in about 20 to 30 per cent. of the people. If it makes trouble it must be cauterized. If it is attacked with the knife you can not avoid cutting the palate artery.

DR. WILLIAM E. CASSELBERRY—I have observed no less than half a dozen cases of serious hemorrhage following tonsillotomy in adults, and have also had it happen once in childhood. It has happened after all the methods, but most frequently after the use of the tonsillotome. I have had it occur after the galvanocautery and the cold wire snare. Of late years I have adopted largely with adults the fragmental method as a guard against hemorrhage, not that bleeding does not occur after the removal of small pieces of tonsillar tissue at a time, but one is better able to cope with it by prompt cauterization when the cut surface is small. I have, however, had two copious bleedings after the removal of comparatively small fragments, not larger than one-quarter of a moderately hypertrophied tonsil. In one of these cases, it occurred with the last of eight fragments of the two tonsils removed at intervals of a few days, the cut which bled being low down in the pharynx. It was stopped by cauterizaton of a small spurting vessel. In the other case it was also the last fragment, but the cut was located high up in the velar tonsil and the bleeding was stopped by digital compression. I believe these hemorrhages are liable to occur, no matter what method we adopt, and therefore I am chiefly interested in the measures to be taken to control hemorrhage promptly when it does occur. I believe that a hemorrhage which will be checked by tannic acid, ice ferripyrin, and other preparations of iron, would stop itself spontaneously. I do not favor loss of time in the use of these materials in really serious cases, because my experience indicates that an arterial hemorrhage or a copious venous hemorrhage, capable of exsanguinating the patient, will not be controlled by any chemical astringent. In the case mentioned by Dr. Pierce, where he packed a small cavity with cotton, saturated with ferropyrin, a good result was obtained, but it was undoubtedly the pressure secured rather than the astringent which so promptly checked the bleeding. I have found that the best way is to sponge the throat clear of clotted blood, even at the expense of momentarily increasing the hemorrhage, and to look for the bleeding point, just as one would in hemorrhage from an ordinary surface wound. If one does not find a spurting artery one at least ascertains that it is not an artery that is bleeding, but a general venous ooze, which information is of value in the selection of subsequent means of treatment. In the majority of cases of serious hemorrhage, however, you will find a vessel which has a slight spurt. In most but not all of my own cases I have been able by careful swabbing to cauterize that bleeding point with the galvano-cautery. This apparatus, unfortunately, is not always at hand; also the bleeding may be so copious that without skilled assistance it would be impossible to carry out this method. If there is a cavity or deep sulcus between the faucial pillars that will retain gauze, one would of course pack it, but this favorable condition is usually absent. The next expedient is pressure, and I believe this method is almost universally available, and if resorted to promptly would gain the desired end quickly. To exert pressure one always has at hand his forefinger and thumb, if not one of the various tonsillar pressure hemostats. In one of my cases, after two efforts at cauterization while still in the office, and a third effort at the hospital late in the evening had failed, I applied a Störk's tonsil pressure hemostat, which worked perfectly. In the absence of the hemostat one must use the thumb and forefinger, but it is not always necessary to maintain pressure for a great length of time. In the majority of cases one-half hour at the most would be likely to suffice. Gauze wrapped around the finger is an aid, and upon this may be placed any desired astringent. I adopted this method in the case above mentioned, in which hemorrhage occurred after the abscission of the velar fragment of a tonsil, and the bleeding which had resisted other methods for two hours ceased after ten minutes' digital pressure. I have had no experience with catching up the bleeding vessel by forceps or ligating the stump or suturing together the faucial pillars. The patient is usually so panic-stricken that complicated methods could not be accomplished without a general anesthetic. One can conceive that a general anesthetic might be necessary to control the patient in order to carry out any method, and this might be especially true of children. I recall only one case of my own in a child, a dispensary patient aged 10 years, in whom secondary hemorrhage occurred eight hours after the operation, and continued till syncope ensued, when the bleeding ceased.

A Case of Latent Frontal Sinusitis.

DR. GEORGE E. SHAMBAUGH—This woman's nasal trouble dates back 12 years, when following an attack of typhoid fever she began to have a purulent discharge from the right side of the nose, which has continued ever since. Seven years ago she had polyps removed from the right nares. I saw her for the first time two years ago, when she complained of difficulty in breathing through her nose and of a bitter tasting discharge into her throat. Her throat felt dry and sore and she suffered almost continuously from severe frontal headaches, limited chiefly to the right side. She said she suffered frequently from chills and fever and was quite unfitted for any physical or mental exertion. On examination the left side of the nose was found to be normal. The right naris was completely filled with polyps. The pharynx was the seat of a dry pharyngitis. Percussion over the frontal sinuses elicited marked tenderness on the right side. The polyps were removed and with them the anterior end of the middle turbinated body. With the middle meatus thus freely opened, I succeeded in irrigating the maxillary frontal and sphenoidal sinuses by introducing soft silver canulæ through their normal openings. From each of the three sinuses a considerable quantity of fetid pus was washed out. I saw the patient for several months, and during that time irrigated all three of the sinuses a number of times with a marked relief in the subjective symptoms and some decrease in the amount of the discharge.

I did not see the patient again until this fall, when a marked change in her condition was noted. She has completely recovered from her severe headaches; the sensation of dryness and soreness in her throat has disappeared; the discharge from her nose has almost ceased and is noticeable only for a short time in the morning after rising. I found the right side of the nose open and no recurrence of polyps. The sphenoidal sinus, the opening into which could plainly be seen, was clean and dry. Irrigation of the antrum brought out a clump of thick, fetid pus. Irrigation of the frontal sinus washed out a similar but smaller quantity of thick pus. Since then I have washed out the frontal sinus six or eight times.

DR. OTTO T. FREER—I would like to ask whether the opening in the frontal sinus was in the hiatus semilunaris, or in front of it. Killian says that the opening may be behind the processus unciformis or in front of this, beneath the end of the middle turbinated bone. In the latter case the opening is very short, points directly under the middle turbinated body, and is easy of access.

DR. WILLIAM E. CASSELBERRY—I would ask Dr. Shambaugh what the condition was and is, under transillumination; also, whether in washing out the sinus at times when he says he gets no pus, how much pressure he uses; inasmuch as oftentimes when there is but little pus it adheres to the wall of the cavity, and it takes considerable pressure to wash it off. This is of diagnostic importance, as it indicates the degree to which the case has become latent, or whether it is actually a full recovery.

DR. SHAMBAUGH, in reply—The opening into the frontal sinus was through the ordinary passages, the infundibulum.

The usual opening for the atypical passage is in front and a little to the median side of the hiatus semilunaris. In regard to transillumination, when I first saw the case I thought I observed a deeper shadow over the right frontal sinus. During the last two months I have repeatedly tried the transillumination test without being able to detect any difference in the two sides. As to the amount of pressure used in irrigation, I made use of a fountain syringe, which I elevated about five feet above the patient's head. The canula used had a large opening and the water always flowed freely into the sinus.

DR. T. MELVILLE HARDIE presented a case with "Fracture of the Septum, with an Unusual Complication."

Aneurysm of the Arch of the Aorta.

DR. JAMES T. CAMPBELL presented a case. The patient is aged 75 years, prior to his present complaint, always has enjoyed good health. For 30 years he was in the employ of the I. C. R. R., superintending the construction of water-towers. This kept him out of doors in all kinds of weather, and he had at times heavy lifting and straining to do. Occasional attacks of lumbago is the only disease from which he has suffered. Of late, however, he has had dyspeptic symptoms with constipation. Eighteen months ago, while engaged in work about his barn, he contracted "a cold," had acute coryza and hoarseness. The hoarseness persisting brought him to me. He has a slight inspiratory stridor. The left pupil is dilated, but responds to light. The arteries are cord-like, the radial pulse on the right has a greater volume than that of the left side. The left common carotid has a much greater diameter than it had six months ago. Tracheal tugging was well marked when he first came under observation, but it is now less pronounced. The left vocal cord is in the cadaveric position; the left arytenoid cartilage is on a plane anterior to that of its fellow. In eating and drinking (cold water more particularly) he has some difficulty in swallowing. The particles seem to stop at a point back of the upper portion of the sternum and occasion cough. The cough is dry, with no expectoration. On physical examination no unusual impulse is transmitted to the chest wall. On percussion, the heart dulness extends beyond the normal, upward and to the left. On auscultation no bruit can be heard. By the fluoroscope the uniform dilatation of the artery can be very clearly seen, involving the transverse and beginning of the descending aorta. The absence of bruit is, I think, accounted for by the fact that the arterial coats have expanded uniformly, and that there is no special resistance to the blood current.

Dr. Campbell read also a paper on "Ulceration of the Tongue Associated with Pulmonary and Laryngeal Tuberculosis."

DR. OTTO J. STEIN read a paper on "A Case of Laryngeal Disease."

NEW YORK OBSTETRICAL SOCIETY.

Stated Meeting, held Jan. 14, 1902.

The President, Dr. Malcolm McLean, in the Chair.

Gonorrheal Pyosalpinx Resembling Tubal Pregnancy.

DR. HERMAN J. BOLDT—At the last meeting of the Society Dr. Coe narrated the history of a patient with gonorrheal pyosalpinx, whom he supposed to have extra-uterine pregnancy. I remarked, at the time, that I, too, had seen women giving histories resembling those we are likely to elicit in instances of ectopic gestation, but they were found to be afflicted with suppurative pelvic disease. The patient from whom this specimen was removed gave the following history:

J. C., aged 34 years, was married 14 years. She had two children; the last two years ago. Menstruation began at 16 and has always been regular when not pregnant. The flow has always been from two to three days' duration, the blood being normal in color. The last menstrual period occurred on December 14, but was only of one day's duration, very scanty, and the blood exceedingly pale. Following the cessation of the flow the patient began to have pains in the left inguinal region, which were described as "labor-like" pains, with exacerbations. The pain at times was so severe that she was compelled to go to bed and send for her physician. Medicine and hot water bags gave temporary relief; she had no appetite; nausea after eating; constipation. The uterus was somewhat softer and larger than normal. On the left side, a little above the vaginal vault, a thick sausage-shaped mass was felt, soft in consistency and very painful to touch. A small part of the tubal enlargement extended behind the uterus, as though from gravity the distended tube sagged toward the cul-de-sac. The examination being quite painful and nothing indicating trouble being found on the floor of the pelvis to the right of the uterus, a more careful palpation was not attempted at this time. The breasts showed no changes indicating pregnancy. The diagnosis of probable unruptured tubal gestation on the left side was made and the patient was placed in the hospital for observation, so that should the probable diagnosis be decided a positive diagnosis from the result of observation, operation could be undertaken without delay. Four days later, on examination, the previously described tubal tumor was found to be somewhat larger than at the former examination, and both breasts upon pressure gave exit to secretion. This change in the breasts was so marked that an error in diagnosis was not considered likely. A tubal tumor was also found on the right side, but much higher in the pelvis; the exact outlines were not mapped out, because of the danger of causing rupture by brusque examination. The presence of the second tubal distension caused some doubt as to the correctness of the previous diagnosis. The question was between bilateral pyosalpinx and a pyosalpinx on the right side and tubal gestation on the left. Bilateral tubal gestation was not thought of, because of the absence of symptoms pointing to such trouble on the right side. My hesitation to make a positive diagnosis under the circumstances was due to previous experience with patients giving histories such as we are likely to get in tubal gestation, and having a swelling in the pelvis, who upon operation were found to have pus instead of embryo in the swelling felt. Abdominal section in our patient revealed bilateral pyosalpinx. The adhesions of the adnexæ to the surrounding structures were extensive and firm. The left tube was enucleated without rupture. The right tube was more distended than the left; the cause of its non-descension into the pelvis was found to be due to intimate adhesions with the small intestines, so firm that the bowel was injured during the separation of the tube. While attempting to separate the ovary from the right oviduct with a view of saving a part of the gland to preserve the function of menstruation rupture took place. On examination the pus showed the presence of gonococci. The husband upon interrogation denied that he had had gonorrhea except one time, between fifteen and twenty years previously. At times, he admitted, the urethral orifice was agglutinated on arising mornings. Considering the history which was given by the patient, in connection with the condition found, the truthfulness of but one attack of gonorrhea fifteen or twenty years ago is, in my opinion, doubtful. Were it true the case would, in my experience, be unique. I would be grateful to hear other opinions, because I consider this a very important question, and it might cause a change of opinion as to gonorrhea in connection with conception. Another interesting feature is the absence of symptoms from the larger right pyosalpinx, with the presence of such intense symptoms from the left pyosalpinx.

Inflammatory Growth of Cecum and Ascending Colon Necessitating Resection of Bowel—Recovery.

DR. HIRAM N. VINEBERG—Mrs. J. S., aged 27 years, had a large ventral hernia following an abdominal hysterectomy performed by me in April, 1898, for acute puerperal sepsis, in which the uterus was studded with abscesses varying in size from a pea to an almond. The abdominal wound was left in great part open so as to admit extensive packing with iodoform gauze; hence the subsequent hernia. The woman was desirous of having her hernia operated on, which I accordingly did on April 15, 1901, at St. Mark's Hospital. There was an extensive adhesion of the omentum to the scar, making the operation rather tedious and of considerable duration. The long abdominal wound healed by primary intention excepting an area about an inch at the upper angle where a sero-

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sanguinous discharge took place, opening the wound down to the peritoneum for the aforesaid distance (about an inch). To shorten her stay in the hospital and to prevent a possible occurrence of a small hernial protrusion at this point, I freshened the edges of the wound and sutured it with chromicized catgut, leaving the skin unsutured. The union proceeded normally and the patient was allowed to get up a week later. A few days before getting up, during the absence of the nurse, she had a desire to urinate and reached over the side of her bed for the urinal which was standing on the floor underneath the bed. While doing so she felt something give way, she said, in the right side of the abdomen and she was seized with a sharp pain in that region. The next day, when I saw her, I could palpate an elongated mass about the size of the index finger at the outer border of the right rectus muscle and just below the line of the umbilicus. This mass seemed rather superficial and was quite tender. There was slight temperature, 100 F. She left the hospital May 15 and made very little complaint of the pain in the right side of her abdomen. She was up and about until May 27, when the pain in her side became severe. She felt feverish and vomited a couple of times. She took to her bed and I saw her on May 30, three days later. She then had a temperature of 102 and a pulse of 106. There was no abdominal distension. She had had daily movements of the bowels. On palpation a mass about the size of a closed fist was felt at the outer border of the right rectus muscle. It was rather ill-defined, seemed fixed, and appeared to be immediately beneath the abdominal wall. One of two conditions occurred to me: 1, an appendicitis with a purulent exudate in a somewhat abnormal position; or 2, a gauze compress which inadvertently had been left within the abdomen during the operation for the hernia. On May 30 I cut down upon the mass and found the muscles infiltrated and edematous. Just before opening the peritoneal cavity some dark grumous material appeared in the wound. This was mopped out and the peritoneum carefully opened. I now found a mass about the size of the closed fist, giving the impression of a sarcomatous growth involving the cecum and ascending colon. I resected about eight inches of the gut, going about an inch above and about an inch below the growth. The two ends of the bowel were united by a Murphy button. The patient had a rather stormy convalescence, but ultimately made a good recovery, passing the button on the 19th day after the operation. She has remained perfectly well since. The excised growth seemed to spring from the peritoneal covering of the intestine, was quite friable and could be easily broken off with the fingers. Dr. F. S. Mandelbaum, pathologist to Mt. Sinai Hospital, made a thorough microscopic examination of it and pronounced it to be of an inflammatory nature.

The explanation of the development of this inflammatory growth is not easy. Two probabilities occur to me: 1. A traumatism was inflicted to the rectus muscle in the act of reaching over the side of the bed to the floor. This excited an inflammatory process which extended by contiguity to the peritoneum and underlying intestines. 2. The secondary suture excited a low grade of inflammation which extended in the same way. The following facts are in favor of the first assumption: The sudden onset of the pain following the aforesaid act; the appearance of the mass shortly afterwards, decidedly appreciable when I saw her twenty-four hours later; the site of the original swelling, fully two inches external from the line of sutures and at the outer border of the right rectus muscle.

Early Recurrence of Carcinoma in Vaginal Scar Following Abdominal Hysterectomy for Adeno-Carcinoma of Fundus Uteri.

DR. HIRAM N. VINEBERG—The following case is of interest in showing how unfavorable the prognosis may prove to be in the most favorable form of carcinoma of the uterus even when operated upon at a very early date. Mrs. S., about 61 years, widow for 7 years, mother of 2 children. The menopause was established 12 years ago. While in Germany last summer and in apparently good health she was suddenly seized with uterine hemorrhage. She immediately went to Strasburg to consult Prof. Freund. On Sept. 27, 1900, two weeks after the first appearance of the hemorrhage, an abdominal hysterectomy was performed by Prof. Freund. The extirpated uterus showed a fibroid growth the size of an English walnut in the uterine wall on the left side near the os internum. At the entrance of the right tube into the uterus the mucosa showed a small area of carcinomatous degeneration. The patient made a rapid and good recovery from the operation, the abdominal wound healing throughout by primary union, although a fairly-sized hernia developed at the lower end of the wound shortly afterwards. Three months after the hysterectomy, on Dec. 29, 1900, she consulted me on account of a vaginal bloody discharge which had made its appearance two weeks before. The amount of blood lost was small at first, but latterly had grown quite profuse and she passed several large clots. Her general appearance was quite good though she complained of some weakness.

On vaginal examination a friable mass, the size of the end of one's thumb, was found occupying the scar in the vagina. It bled very freely on being touched. To the left of this the tissues were found pretty extensively infiltrated. The inguinal glands were not found to be enlarged and no infiltration existed in the abdominal scar. On Jan. 2, 1901, I excised with scissors, curette and Pacquelin cautery the mass in the vaginal scar and as much of the infiltrated tissues as was feasible. The removed tissues were kindly examined by Dr. F. S. Mandelbaum, pathologist of Mt. Sinai Hospital, who pronounced them to consist of epithelial carcinoma. The patient, after this, had no further hemorrhage and seemed to improve in her general health. But in the early part of May she showed marked signs of cachexia and died on May 30, eight months after the original operation.

Long Mucous Polyp Attached in the Upper Portion of the Uterus in the Horn Protruding at the Introitus Vaginae.

DR. MALCOLM MCLEAN—Mrs. C., aged 52, married, a multipara, has had "dragging pains in the back" with frequent sensations of "bearing down" for the past three or four years. There has been a feeling of obstruction in evacuation of the bowels accompanied by a sensation of dragging in the vagina "as though all the organs were coming out." During all this time there has been an exhibition of irregular metrorrhagia, with irritating watery discharges in the intervals. The patient has been very anemic although she is of excellent build and has healthy organs apparently throughout the rest of the body. Examination showed a uterus slightly enlarged by an interstitial fibroid. Protruding into the vagina to the introitus was found a long polypoid growth, soft and traversed by cell-like cavities. It was attached by a rather narrow base (one-half inch) to the left horn of the fundus uteri. Under ether anesthesia it was drawn down and easily detached by dissecting it off with the finger. It measured five and a half inches in length and two and one-quarter inches in diameter. The patient is recovering promptly.

Dudley's Operation for the Relief of Severe Cases of Recto-Vaginal Fistula.

DR. A. PALMER DUDLEY—I devised this operation while delivering my course of lectures at Dartmouth Medical College last year. I have presumed to designate it as "Dudley's Operation for the Relief of Severe Cases of Recto-Vaginal Fistula," because, so far as I am able to learn, in looking over the record of such cases, it is original with myself and rather a unique procedure; nevertheless, it was successful and, in my judgment, will in the future receive recognition from the profession, and take its place as a surgical relief for such a condition.

A short description of the case and the method of procedure for relief would be the most concise manner in which I can present my claim for originality for the operation. The patient operated on by this method was 47 years of age, married and the mother of three children. She was admitted to the Mary Hitchcock Hospital July 23, 1901, suffering from a combination of pelvic diseases, of which may be mentioned, hemorrhoids, laceration of the perineum, recto-vaginal fistula, laceration of the cervix, and retro-displacement. The major condition was

recto-vaginal fistula, through which fecal matter and gas constantly escaped, which had been operated upon twice before, without successful result. She was a woman without means, occupying a free bed in the hospital, so I determined to do all necessary work for her, provided she stood the anesthetic well. Each and every member of this Society is, or should be, perfectly familiar with the operative methods of procedure for all forms of fistula as practiced by Sims, Emmet, Bozeman and their followers down to the present time, and it would be out of place for me to call attention to the different methods and peculiarities of each operator. Instantly upon examination of this case, I recognized the possibility of a third failure unless I could by some means treat the rectal mucous membrane, and in some manner whereby it would be impossible for a leakage of gas and fecal matter to take place, in case the vaginal site of the wound did not heal by primary union, and as the patient was suffering from hemorrhoids which required removal, I determined upon the following plan:

The patient was placed in the Sim's position, the quadrivalve speculum was introduced into the bowel, and the sphincter ani thoroughly but carefully divulsed. I then made Whitehead's operation for hemorrhoids, going right around the entire anus, just through the mucous membrane. I then dissected the mucous membrane of the rectum from the attachment to the sphincters, and continued the dissection, separating the mucous membrane of the rectum from its attachments to a level with the upper edge of the opening in the bowel, carefully separating the mucous membrane of the rectum from around the edge of the fistula. I then continued the dissection on sufficiently far to allow me to draw the rectal mucous membrane, including the fistulous opening, down to the anus. The mucous membrane of the anus was so dissected out, was then cut away including the hemorrhoidal vessels. The mucous membrane of the rectum was then sewn to the skin of the anus around the entire circumference of the latter, as in Whitehead's operation for hemorrhoids. This procedure, of course, did away with the fistulous opening in the rectum. The patient was then turned upon the back, the uterus curetted for fungous growth, the fistulous opening through the vaginal coats denuded, and sewed up, simply as a superficial wound in the vagina with catgut. The perineum was then restored by my own method of procedure, using only catgut as a suture. A small abdominal incision was then made, adhesions about the uterine appendages broken up, and the uterus brought forward and fastened by ventro-suspension. The patient went to bed in good condition. Each one of the wounds healed by primary union, and the patient left the hospital just four weeks after the operation, with good control of the sphincter ani, the fistula perfectly healed, and the uterus in good suspension. I want to draw attention to one point in this operation, and the future application of it in cases of accidental fistulæ high up in the vaginal vault, as a result of hysterectomy. In my judgment in cases of high fistulæ, it would not be necessary to resect the bowel to a level of the fistula, but only such portion of the bowel as would be sufficient to change the position of the rectal opening, with that of the vaginal, so as to flap each fistulous membrane against unbroken structures and then sewing the parts carefully together with whatever sutures you deem best suited to the occasion.

DENVER AND ARAPAHOE MEDICAL SOCIETY.

Regular Meeting, held Jan. 14, 1902.

The President, Dr. H. G. Wetherill, in the Chair.

Consumption Contracted in Colorado and Methods to Restrict Its Spread.

DR. S. G. BONNEY holds the opinion that the infection of tuberculosis is extremely slow and incremental in character, the contagion constituting a source of danger to such alone as are especially predisposed, and only after prolonged exposure or repeated infection. Tuberculosis developing in Colorado should not be ascribed, therefore, as resulting from intimate association with pulmonary invalids after the manner of certain contagious diseases. As a direct causal factor in the development of the disease in Colorado should be considered the unfavorable occupation of a considerable class of her people, namely, the miners. Absence of sunshine, inhalation of an atmosphere vitiated by dampness, dust and smoke, climbing of mountains and ladders in high altitudes, and carrying of heavy burdens can not fail to exert a deleterious influence. Another factor is the strong inherited susceptibility of her youthful population born of tuberculous parents. The question whether consumption developed in Colorado is increasing from year to year, is of momentous importance. The State must secure adequate protection for her communities without unnecessary infringement upon the rights and privileges of her consumptives. The medical profession must also assume an enormous responsibility in its advisory capacity. It is natural that much interest would attach to the report of the committee upon tuberculosis appointed a year and a half ago by the State Society, which was made public at the last annual meeting. The report states that the total tubercular death-rate for the 16 months during which the statistics were collected, is 13.32 per cent. This happens to be the same proportion as was published by the Denver Health Department in 1894. Besides, the increase in population has not been taken into account. Nearly one-fourth of all cases developed in Colorado were children under 5 years of age. These deaths should not be included as instances of indigenous tuberculosis. Out of a total of 224 cases, one-fifth occurred in miners. The location of the indigenous cases by counties is interesting. El Paso County, containing relatively more consumptives than any other county in the state, had only six cases. Gilpin County, in which consumptives are but few, offers a percentage nearly three times as large. The explanation is that the inhabitants of El Paso enjoy the privileges of sanitation, but the inhabitants of Gilpin County are mostly composed of miners who devote less attention to hygienic laws. Furthermore, there is an entire absence of proof that these cases were actually contracted in Colorado. Such an attitude of the committee implies the non-acceptance of the theory of latent tubercular process. The committee reports that numerous experiments with animals have shown that animals may be as readily inoculated with the tubercle bacilli at this altitude as at a lower one, yet one fails to appreciate the practical significance of the inquiry. He does not understand how any reasonable interpretation of the official data justifies the implied, not directly expressed, conclusion of the committee of a rapid and an alarming increase of tuberculosis in Colorado. He has seen 16 cases during a period of ten years out of a series of 1200 reported cases of consumption who were kept under rather continuous observation. Two were old miners, one a stone-cutter with chronic Bright's disease, one a layer of carpets and one employed in a steam laundry. The etiological factor in these 5 cases is evident. Two have developed the disease six months after arrival; it is uncertain, therefore, whether the disease originated in Colorado. In 3 there are distinct histories of exposure. The remaining examples of tuberculosis developed in Colorado, for which no explanation could be found. He protests against such incendiary public utterances from medical men in Colorado, as have given the impression that the future of our communities are being seriously endangered from imported cases. The promulgation of such views are not warranted by facts. He advocates the following measures for the restriction of tuberculosis: 1. Compulsory notification and registration. 2. The education of the consumptive himself, in the rigid observance of sanitary precautions. 3. State sanatorium for the poor. 4. Segregation hospitals for the hopeless and impoverished. 5. Periodic disinfection of apartments occupied by the sick. 6. Prohibition of expectoration wherever people walk. 7. Public attention should be drawn to proper mode of living, occupation, etc. 8. For creation of societies for the study and prevention of tuberculosis. 9. Government and municipal supervision of the construction of public buildings, tenement houses, factories, etc.

DR. HENRY SEWALL said that the outside world is bound to misunderstand us. The question is: Is tuberculosis developed in Colorado or not? The facts warrant a positive assertion. What is the probable progress of the disease during the next

century? Since no one denies the existence of indigenous tuberculosis in Colorado, and since such cases developed only during the last two decades, and now two persons out of every 10,000 die of it, it is more than probable that the disease is on the increase.

DR. E. F. WAXHAM agrees with Dr. Sewall. While we should teach that tuberculosis is a communicable disease, we should also teach that it can be restricted.

DR. CARROLL EDSON contends that half of the cases reported by the committee has not been verified by bacteriologic examination.

DR. O. J. PFEIFFER has not seen a single case of indigenous tuberculosis in Colorado during all the years of his practice.

DR. S. A. FISK said that his experience is not in accord with the conclusion of the committee of the State Society.

DR. G. E. TYLER said that those who speak disparagingly of the work of the committee have probably not read the report in the original. All the committee claimed was summarized as follows: That tuberculosis is indigenous to the State; that it was not formerly indigenous, but has become so through infection from imported cases; and that plans to prevent the further spread of this disease be devised and put in execution at the earliest possible moment.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquires concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

PRESCRIPTION WRITING, XI.

(Continued from page 272.)

Methods of Administration.

Medicines for general effect may be administered in one of the following ways:

1. Hypodermically.
2. Endermically.
3. As a liniment.
4. As an ointment.
5. In the form of a suppository per vaginam or rectum.
6. By the respiratory tract.
7. Per os.

Hypodermic Medication.

The advantages of hypodermic medication are that certain results may be expected from the dose given, because it enters directly into the circulation and consequently does not undergo any change or decomposition which might take place if given by the stomach. Physiological results are obtained much quicker than by any other method of medication. It is the best means of administration when the stomach is not capable of promoting proper absorption. In emergency cases where rapid stimulation is imperative this method should be employed. In cases of acute pleurisy, for illustration, or an attack of gallstones, or perhaps an acute attack of appendicitis, when medicines can not be borne by the stomach, the pain may be relieved by hypodermic injections of morphine or codein. The possible consequences of this method, however, can not too constantly be borne in mind, namely: The dangers of the patient contracting the drug habit. A large percentage of these habitués places the blame of their downfall upon the physician. That the use of the hypodermic needle in the hands of the physician has been abused, in a great many instances, there can be no doubt. The relief of pain, the promotion of sleep, and the quieting of nervous symptoms can be obtained by other methods in the vast majority of cases if the physician would devote a little more time to the study of his patient and the accompanying symptoms.

However, when the conditions demand hypodermic medication, a proper site should be selected for the injection, the most suitable localities being the outer aspects of the arms and thighs, the abdominal wall, between the scapulæ and in the calves of the legs. On the thigh, just anterior to the greater trochanter, it is said that there is an area two inches square over which a hypodermic needle can not be felt on account of the comparative absence of nerve filaments.

The experience of recent years has introduced methods of treatment which sometimes demand large quantities of fluid to be introduced beneath the skin, such as the introduction of normal salt solutions, to take the place of large quantities of blood lost in an operation; the injection of antitoxins in treatment of the infectious diseases and the introduction of gelatin solutions to check dangerous hemorrhages. When such large quantities are to be given, locations upon the body should be chosen where the skin is loose and the large needle can be easily introduced. The fluid should be allowed to flow as slowly as possible, no difference how great or small the quantity. It is not unusual for sloughing to follow at the site of the injection when it is pushed in too hurriedly, due probably to destruction of the capillaries supplying the parts. It is not necessary to mention the need of absolute cleanliness in preparing the skin for the injection and in rendering the needle thoroughly aseptic, also of certainty that all the air has been excluded from the syringe. Sometimes it is preferable to inject remedies immediately into the deeper tissues in order to reach a certain set of muscles or to produce some local influence upon a large nerve trunk. In cases of progressive muscular atrophy, in its earlier stages, hypodermic, or better parenchymatous, injections of medicines are often recommended. The introduction of a sedative directly into the nerve sheath in severe attacks of sciatica is frequently resorted to.

(To be continued.)

Ergotin per Rectum in Metrorrhagia.

According to *Jour. de Med. de Paris*, in cases where ergotin is not well borne by the mouth, it can, after preliminary lavage, be injected per rectum in the following combination:

℞. Ergotini	3iiss	9|50
Acidi salicylici	gr. iii	|20
Glycerini	3v	18|75
Aq. destil.	3iiss	75|

M. Sig.: Inject one teaspoonful per rectum, first diluting it with three tablespoonfuls of water.

Quinin as a Styptic and Antiseptic.

Occasionally the general practitioner is called upon to check hemorrhages which are stubborn to treatment. Marx, as noted in *Med. News*, states that iodoform and its derivatives have so many objections that he has been induced to search for other substitutes. Among these he has tried quinin with great satisfaction. He employs the following combination:

℞. Quininæ hydrochloratis	gr. x-xx	|66-1.30
Alcoholis	3ss	1|88
Aq. destil. q. s. ad	3ii	60|

M. Sig.: Saturate the gauze and apply to bleeding surface.

Treatment of Hiccough Due to Gastric Indigestion.

The following combination, as a stomachic and gastric sedative, is recommended in cases of hiccough due to disturbances of the stomach:

℞. Sodii bicarb.	3iv	15|00
Tinct. nucis vom.	3i	3|75
Spts. chloroformi	3ii	7|50
Tinct. capsici	3i	3|75
Tinct. gent. comp. q. s. ad	3iv	120|

M. Sig.: One teaspoonful in water after each meal.

Treatment of Laryngismus Stridulus.

The following is recommended by *Merck's Archives* in treatment of laryngismus stridulus occurring in children two years of age or older:

℞. Tinct. belladonnæ	m. xii	|75
Chloralis hydratis	gr. xx	1|30
Potassii bromidi	3i	3|75
Syrupi aurantii	3iv	15|00
Aquæ destil.	3ii	60|

M. Sig.: One teaspoonful every hour until difficult inspiration is relieved.

Treatment of the Itching of Chilblains.

Dr. J. Cooperider, of Madison, Ind., states that the experience of thirty years has taught him that the best method of treatment of the itching in frost bite is to immerse the foot in water as hot as can be borne and then increase the heat of the water as fast as the patient can bear it, allowing the foot to remain in the water for twenty or thirty minutes. He states that by repeating the foregoing treatment three times twelve hours apart, a cure will be completed.

Agreeable Methods of Administering Quinin.

Shoemaker recommends the use of the gelatin-coated pill, cachets de pain or coquilles. The following is regarded by him as an agreeable method in the liquid form:

R.	Quininæ sulphatis	gr. ii	13
	Acidi citrici	gr. vi	38
	Syr. aurantii flor.	ʒi	3 75

M. Sig.: To be taken at one dose, placed in a wine glass containing three or four grains of sodium bicarbonate in a saturated solution and drunk while effervescing.

Mercury in Treatment of Diphtheria and Tonsillitis.

Shoemaker also recommends the following prescriptions to relieve the throat symptoms in diphtheria or tonsillitis:

R.	Hydrarg. chloridi mitis	gr. ii	13
	Antimonii et potassii tartratis	gr. i	065
	Sacchari albi	ʒss	1 90

M. fiant chartulæ No. x. Sig.: One powder every hour or two; or:

R.	Hydrargyri chloridi corros.	gr. i	065
	Tinct. guaiaci	ʒi	30
	Glycerini	ʒii	60

M. Sig.: One-half to one teaspoonful every two or three hours.

Treatment of Adenitis in Children.

If there is no visible cause the diathesis should be sought and treatment applied according to such conditions. In the early stage of acute adenitis before suppurative signs are present, cold should be applied to the swollen glands or a compress wet with a solution of formaldehyd, carbolic acid or corrosive sublimate, which quite often arrests the induration and prevents the formation of pus. If suppuration already exists the involved glands should be freely opened and evacuated. In chronic adenitis general tonics according to the causal ailments should be administered. Inunctions of green soap every other or third day should be tried when tuberculosis is suspected and iodipin given internally. The most reliable treatment is the radical extirpation of the glands.—*Merck's Archives.*

[Iodipin is an iodin addition-product of sesame oil. It is a yellowish fluid of oleaginous taste. It can be given to adults in doses ranging from one to two drams of the 10 per cent. strength, three times a day, or in combination with peppermint water, or flavored with oil of peppermint.]

Medicolegal.

Not Liable for Medical Services for Non-Resident.—The Supreme Court of Nebraska holds, in the case of Gilligan vs. The Town of Grattan, that a township is not liable for medical services rendered a non-resident pauper, as for example where a person injured on a railroad in one township is brought into the city in another township, where a justice of the peace orders a physician to render professional services to him at the expense of the township. Whether the county would be liable, under the Nebraska statute, the court does not say. But it declares that no county, nor any subdivision thereof, is liable for the support of the poor or medical attendance bestowed thereon unless the legislature has so authorized. And, "poor within the town," it holds, means paupers whose domiciles are in the town.

Describing Pneumonia as "a Cold."—In an application for a policy of life insurance the applicant warranted that he had never been seriously ill, and that within two years before making application he had not been under the care of a physician except "for cold." These statements were by the policy made part of the contract as warranties. Their falsity, the Supreme Court of New Jersey holds, Finn vs. Metropolitan Life Insurance Company, annulled the contract. It was shown that within the two years the party had been ill with pneumonia, by which he was confined to his bed, under the care of a physician, for about two weeks. The suggestion that the illness could be truthfully described as "a cold," the court holds, could not be reasonably entertained, and the insurer had a right to expect information more consonant with the fact. The warranty made the validity of the policy dependent on such information being given.

Imprudently Treated Wound.—A man was slightly wounded in the leg by the bite of a dog. His daughter obtained from the owner of the dog a small bunch of the latter's hair, and conceived the idea that it would soothe the wound, and cause it to heal. She put this hair on the scratches inflicted by the animal, carrying out the old saw that the hair of the dog is an antidote for the bite. After having put on the hair, she applied a piece of salt meat over the hair. The hair and the salt meat remained on the wound for about a week, at the end of which week erysipelas developed. The application was removed, and a physician sent for. But the man died. The Supreme Court of Louisiana holds, Martinez vs. Bernhard, that, in such a case, the owner of the dog could not be held liable for damages, the two physicians who examined the wound testifying that septicemia probably resulting from the imprudent treatment, and not the bite of the dog, was the cause of death.

Presumptions Where a Person Asks for a Certain Drug.—The Supreme Court of Iowa says, in the case of Gibson vs. Torbert, that it believes the true rule deducible from reason and from authorities is that when a person who has reached the age of discretion, and who is apparently in the possession of his mental faculties, applies to a druggist for a certain drug, he represents to the dealer, by implication, at least, that he knows its properties and uses, and that he is a fit person to whom sale thereof may be made, and that unless there is something connected with the transaction, or something previously known to the seller, indicating that the would-be purchaser can not safely be intrusted with the substance, a sale of the substance called for may be made without explaining its properties or the manner in which it may be safely used or handled, and that, under such circumstances, the seller is not liable in damages for injuries to the purchaser resulting from the improper use or handling of the article, no matter how little knowledge the purchaser may in fact have had of its properties, or of the manner in which it could not be safely used or handled. It appears clear to it that the vendor's legal duty to such a purchaser can go no further than to give him the identical substance he calls for. Nor does it think that it will do to say that a man who may not be able to correctly compose or to correctly spell, or whose writing is poor, is unfit to be intrusted with dangerous substances; for some, at least, of the great inventive geniuses of the world have been deficient in all of these respects.

Opinion of Patient as to Intent of Physician.—The principal and vital question in the case of State vs. Pierce, the Supreme Court of Minnesota says, was whether the physician charged with the crime of abortion used instruments upon the person of the complaining witness, and gave her medicines, with an intent to bring about a premature delivery, or for the purpose of treating her for a venereal disease; the use of instruments and the giving of medicines being admitted. Against the objections of the physician's counsel, the trial court permitted this witness to express her opinions or conclusions as to the purpose for and intent with which the instruments were used and the medicines furnished. The Supreme Court holds that this was a prejudicial error, for which the verdict of conviction must be set aside. It says that it was the physician's right to have his intent determined from the facts proven, independently of the opinion or conclusion of the woman as to what he might have intended. His intent was to be determined from what was done, and not by what the

woman thought as to his purpose or object when he treated her. The answers given to the questions were not statements of evidentiary facts, but simply opinions and conclusions as to the existence of a vital fact, and they were not relevant thereto. If the complaining witness could be allowed, in aid of conviction, to express an opinion to the effect that the physician intended to produce a miscarriage, she could have been allowed for the same reasons, and on the same grounds, and to facilitate an acquittal, to express an opinion that he simply treated her for gonorrhea. The impropriety of such testimony is very evident. That it strongly tended to prejudice the physician's case in the minds of the jurors is manifest.

Limitation of Privilege After Death of Patient.—In the case of the State of Iowa vs. Grimmell, a prosecution for murder in the second degree which it was alleged was the result of an abortion, where a verdict of not guilty was returned, certain testimony of a physician who had been called into the case was excluded as privileged. But the Supreme Court of Iowa disapproves of this ruling. Section 4608 of the Iowa Code provides: "No physician or surgeon * * * who obtains information by reason of his employment * * * shall be allowed, in giving testimony, to disclose any confidential communication properly intrusted to him in his professional capacity, and necessary and proper to enable him to perform the functions of his office according to the usual course of practice. * * * Such prohibition shall not apply to cases where the party in whose favor the same is made waives the rights conferred." The Supreme Court says that even in civil cases it has extended the language of the statute, and expressly held that the prohibition may be waived, either by the testator, or after his death by those who stand for him. And it says that it surely will not do to hold that a statute intended to protect a patient should operate as a shield for one who is charged with murder. Such a construction, while perhaps technically correct, is evidently so foreign to the purpose and object of the Act, and so subversive of public justice, that it ought not to be adopted, except for the most imperative reasons. The safety of the public is the supreme law of the commonwealth, and the Supreme Court says that it does not think the legislature, in passing the act in question, intended it to operate as a barrier to the enforcement of the criminal laws of the state. If the patient were alive, perhaps no one but she could waive the prohibition. But in this case she was dead and unable to speak. If in a civil case her representatives might waive the prohibition, the court sees no good reason for saying that in a criminal one the prohibition is absolute. The purpose of the statute, as has been stated, is to protect the patient, and not to shield one who feloniously takes his life. The authorities, the court adds, uniformly support this position.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal, January 18.

1 *Implantation of a Gold Ball for the Better Support of an Artificial Eye. L. Webster Fox.
2 The Influence of Electric Ozonation upon Disease. G. Lenox Curtis.
3 Clinical Notes on Gleet. (Concluded.) A. Ravogli.
4 The Conservative Treatment of Appendicitis and the Fallacy of the Starvation Cure. J. H. Carstens.
5 *Concerning Hepatic Syphilis. Simon Flexner.
6 *Electricity in Renal Disease. A. D. Rockwell.

Medical News (N. Y.), January 18.

7 *Congenital Atresia and Stenosis of the Rectum and Anus. W. Reynolds Wilson.
8 *General Medical Treatment of Syphilis. G. Frank Lydston.
9 *A Conservative Element in Acute Mastoid Surgery. Edwin W. Fyle.
10 The Class of Cases of Simple Chronic Glaucoma in Which Operation Is Not Advisable. Charles S. Bull.

American Medicine (Philadelphia), January 18.

11 *Artificial Respiration by Direct Intralaryngeal Intubation with a Modified O'Dwyer Tube and a New Graduated Air-Pump in Its Applications to Medical and Surgical Practice. Rudolph Matas.
12 *Proper Foot-Wear and the Treatment of Weakened and Flat Feet by Mechanical Devices for Maintaining the Adducted Position. John A. Sampson.
13 *Concerning a Sugar-Forming Ferment in Suprarenal Extract. A Preliminary Report on Suprarenal Glycosuria. Alfred C. Croftan.
14 *Obstetric Forceps in Relation to Tuberculous Lungs, Cardiac Lesions, Anemia, etc. George E. Abbott.
15 Hysterectomy and Removal of a Nine Months' Fetus Dead in Utero for Fifteen Months; Transposition of the Heart to the Right Side. Frank J. Thornbury.
16 Perforation in Typhoid Fever; Operation; Recovery. Richard T. Davis.
17 Astasia—Abasia. George S. Gerhard.

Boston Medical and Surgical Journal, January 16.

18 *Difficulties in the Diagnosis of Syphilis. James C. White.
19 *Needless Laparotomies, with a Report of Eight Cases. John C. Munro.
20 *The Vagus Reflex. Thomas J. Mays.
21 *Auscultation of the Knee-Joint. William E. Blodgett.

Medical Record (N. Y.), January 18.

22 Prognosis: Its Therapeutic Value. Henry F. Walker.
23 *The Pathologic and Therapeutic Aspects of the Effects of the Roentgen Rays. Carl Beck.
24 *Suprapubic Cystotomy in Operations on the Prostate. Howard Lilienthal.
25 *Alcoholic Amaurosis. Frank Van Fleet.
26 Report of a Case of Addison's Disease. Edgar M. Green.

Philadelphia Medical Journal, January 18.

27 Results of Operative Treatment for the Different Forms of Puerperal Sepsis. Barton C. Hirst.
28 Decreasing Fecundity Concomitant with the Progress of Obstetric and Gynecic Science. George J. Engelmann.
29 *The Obstetrical Forceps. A. Lapthorn-Smith.
30 Primary Carcinoma of the Uterine Fundus. J. M. Baldy.
31 A New Method of Tamponing the Uterus Postpartum: The Wood-Holmes Introducer. Rudolph W. Holmes.
32 The Immediate Repair of Injuries of Parturition. A. L. Benhan.
33 *Remarks on Early Ectopic Gestation. E. K. Browd.
34 Puerperal Myelitis; Report of a Case Following Abortion. Harry Morell.
35 On the Desirability of Further Data Concerning the Prevention of Ophthalmia Neonatorum. Lucien Howe.
36 Outline of the Surgical Treatment of Acute Pancreatic Injuries. B. E. Hadra.
37 *Some Experiments on the Formation of Bile Pigment and Bile Acids: A Contribution to Our Knowledge of Icterus. (Continued.) Alfred C. Croftan.

The Cincinnati Lancet-Clinic, January 18.

38 *The Medical Profession and the Public Unrest—Who Is Responsible? D. R. Silver.
39 *Gelanthum in Lupus Erythematosus and Allied Affection. M. L. Heidingsfeld.
40 A Specific for Chronic Rheumatism. P. C. Layne.

St. Louis Medical Review, January 18.

41 The Non-Heredity of Acquired Characters. Lawrence Irwell.

New York State Journal of Medicine (N. Y.), January.

42 Tuberculin and Products of the Tubercle Bacillus. E. A. de Schweinitz.
43 *The Treatment of Pulmonary Tuberculosis. Charles E. Quimby.
44 *Surgical Procedures for Pulmonary Tuberculosis. William D. Le Boutillier.
45 *Comments on Some New Surgical Methods. John A. Wyeth.
46 Gunshot Wounds of the Hip-Joint by Reduced Caliber Projectiles. Louis A. Lagarde.
47 Malignant Disease of the Nose and Accessory Sinuses. Joseph S. Gibb.

Colorado Medical Journal, November, 1901.

48 *Dry Heat in the Treatment of Disease. R. W. Corwin.
49 Causes and Treatment of Earache. N. C. Williams.
50 History of St. Anthony's Hospital. Russell B. Freeman.
51 History of St. Joseph's Hospital. W. W. Grant.
52 History of the Colorado Fuel and Iron Company's Hospital. R. W. Corwin.

Peoria Medical Journal, December, 1901.

53 Organic Disease of the Cerebellum. Frank P. Norbury.
54 Clinical Microscopy. H. H. Fletcher.

International Medical Magazine (N. Y.), December, 1901.

55 *The Treatment of Chronic Gastric Catarrh. C. A. Ewald.
56 Unrecognized Syphilis in General Practice. L. Duncan Bulkley.
57 *The Early and Radical Treatment of Ischio-Rectal Abscess. Collier F. Martin.
58 The Treatment of Hip-Joint Disease. James K. Young.
59 The Prognosis and Treatment of Constipation. Boardman Reed.

Denver Medical Times, January.

60 *An Operation for Spina Bifida, with Report of a Successful Case. Leonard Freeman.
61 A Case Resembling Locomotor Ataxia, Death, Postmortem, with Exhibition of Specimens. R. Harvey Reed.
62 Gleet: What Is It, and How Can the General Practitioner Successfully Treat It? Donald Kennedy.

American Gynecological and Obstetrical Journal (N.Y.), December, 1901.

63 The Utero-Ovarian Artery. Byron Robinson.
64 *The Surgical Treatment of Painful Menstruation. Henry D. Fry.
65 *Tetanus Following Aseptic Cellotomy. Henry C. Coe.
66 *The Anglotribe: Its Use and Abuse. James N. Ellis.
67 *Transverse Suprapubic Division of the Skin in Performing Abdominal Section. Henry J. Kreutzmann.

68 *An Unique Case of Extra-uterine Pregnancy. H. Tuholske.
69 *Curettage. Clarence R. Hyde.
70 Pulmonary Tuberculosis. Samuel S. Adams.
71 Is Cancer Due to a Parasite? J. Garland Sherrill.
72 *Treatment of Pelvic and Abdominal Tumors Complicating Pregnancy with Report of Cases. Rufus B. Hall.
73 An Unique Case of Cervico-vesico-vaginal Fistula. R. Stanbury Sutton.

Louisville Monthly Journal of Medicine and Surgery, January.

74 Heredity. Bernard Asman.
75 Public Hygiene. W. J. Leach.
76 Address, Russell Springs Medical Society. John A. Snowden.
77 Medical Jurisprudence. G. Paul Smythe.

Journal of Cutaneous and Genito-Urinary Diseases (N. Y.), January.

78 *Two Cases of Rare Papular Disease Affecting the Axillary Region. George Henry Fox. With a Report on the Histopathology. John A. Fordyce.
79 Report of a Case of Idiopathic Multiple Sarcoma of the Skin. Henry H. Koehler. With a Report on the Histopathology. James C. Johnston.
80 An Extraordinary Case of Quinin Susceptibility. Henry W. Stelwagon.

Physician and Surgeon (Detroit and Ann Arbor, Mich.), November, 1901.

81 Address, Department of Gynecology and Obstetrics in a University Medical School. Reuben Peterson.
82 *Club-foot. Bart E. McKenzie.
83 The Relation of the Medical Profession to the Department of Public Health. Guy L. Kiefer.
84 Tinnitus Aurium. Simon M. Tutzy.
85 *The Eradication of Scarlet Fever. James W. Ames.

Medical Dial (Minneapolis), January 1.

86 Eddyism or "Science and Health" vs. The Scriptures. W. B. Riley.

St. Paul Medical Journal, January.

87 *A Case of Myasthenia Gravis. Haldor Sneve.
88 *The Administration of Anesthetics. Alice Magaw.
89 The Microscope in Medicine. F. F. Wesbrook.
90 A Case of Acquired Hydronephrosis of 26 Years' Duration; Operation; Recovery; With Some Remarks on the Diagnosis of Cystic Tumors in the Left Hypochondrium. C. O. Thienhaus.
91 Gallstones. Edward Evans.
92 Case of Symptomatic Epilepsy, Circumcision and Complete Recovery. Knox Bacon.

Maryland Medical Journal (Baltimore), January.

93 A Case of Sympus, or Mermaid. Wm. Royal Stokes and Richard L. McNeer.
94 Infective Otitis Media, Without Its Usual Subjective Symptoms. Hiram Woods, Jr.
95 A Case of Hemiplegia Associated with Complete Hemianesthesia and Unilateral Muscular Atrophy of the Paralyzed Side. Robert Reuling.

Nashville Journal of Medicine and Surgery, December, 1901.

96 Sanitary Obligations Existing Between the Social Unit and the Community. J. D. Plunket.

Virginia Medical Semi-Monthly (Richmond), December 27.

97 Gunshot Wound of the Abdomen. Wallace Neff.
98 Angina Pectoris. Marvin E. Nuckols.
99 The Uric Acid Diathesis and Its Treatment. Wm. S. Gordon.
100 Clinical Odds and Ends of Uric Acid. Lewis G. Pedigo.

Medical Review of Reviews (N. Y.), December 25, 1901.

101 Topography of the Ureters. Byron Robinson.

American Medical Compend (Toledo, Ohio), January.

102 *What Is the Function of the Cerebral Cortex? Hiram A. Wright.
103 Medical Journals. G. A. Collamore.
104 Harelip. J. T. Woods.
105 What Is Our Plain Duty in Desperate Injuries? Report of Cases. Frank D. Baln.
106 Some New Drugs. C. W. Moots.
107 Headache. N. L. McLachlan.
108 Professional Life. J. A. Kimmell.
109 La Grippe. S. S. Hitchcock.
110 Lumbago. J. H. Helleman.
111 An Efficient Hypnotic. D. E. Bowman.
112 Achylia Gastrica with Report of a Case. E. J. Greenfield.

Indiana Medical Journal (Indianapolis), November, 1901.

113 On the Uses of Hydrogen Dioxid. E. J. Kempf.
114 A Case of Spontaneous Rupture of the Abdominal Wall. E. D. Clark.
115 The Immediate Diagnosis of Blastomycetic Dermatitis. A. W. Brayton.
116 Stab Wound of the Diaphragm with Thoracic Hernia of the Colon; Clinical History and Autopsy. A. L. Wilson and E. S. Knox.
117 Recurrent Branchial Cyst. Robert T. Morris.

Texas Medical Journal (Austin), January.

118 *The Record of Yellow Fever in the United States for the Past Does Not Sustain the Mosquito Theory. J. P. Oliver.

Atlanta Journal-Record of Medicine, January.

119 Suppression of Consumption. R. C. Bankston.
120 Report of Cases—Thirty-five Operations for Mastoiditis. James M. Crawford.
121 Corporal Punishment in Schools and the Home. Willis B. Parke.
122 Angina Pectoris. Marvin E. Nuckols.
123 Puerperal Infection. W. Monroe Smith.
124 Case of Nasal Sarcoma, with Remarks. Dunbar Roy.
125 The Early Diagnosis of Pulmonary Phthisis by the Study of the Mean Temperature. J. Tetau.

New England Medical Monthly (Danbury, Conn.), January.

126 Asepsis vs. Antisepsis in Normal Labor. N. Selleck.
127 Observations on Seven Years' Use of Creosote in Pneumonia. J. L. Van Zandt.
128 The Treatment of Syphilis, with Special Reference to the Best Methods of Administering Mercury. Winfield Ayres.
129 The Treatment of Diseases of the Organs of Respiration with the Active Principle of the Suprarenal Gland. F. Elbert Davis.
130 Fifty Infants Treated with Caroid. Russell Pemberton.
131 Anti-Uric Acid Treatment in Dyspepsia. P. K. Bethea.
132 Indigenous Skin Disease; Remarkable Similarity in All Cases. H. Macy MacPherson.

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1. **Gold Ball Implantation.**—Some five years since Fox devised a method of implanting a glass ball into the orbital cavity where the eyeball has been removed. He finds this somewhat defective; that in about 33 per cent. the method failed and the glass ball was expelled. Even when closing the wound and retaining the ball *in situ* there was still 15 per cent. of expulsion. Eighteen months since he devised the present method, which he recommends. The eyelids are kept apart by the speculum, the conjunctiva is then grasped up and in above the inner canthus, and the tissues pulled out. He then passes a Beer's knife or curved keratome somewhat obliquely and well down through the tissues into the orbit, making the opening large enough to push in a gold ball. He enlarges this with curved scissors, separating the tissues from the cellular tissues around the orbit, affording a large pouch. He uses gold balls of 11, 12, 13 and 14 millimeters in diameter and inserts one through this opening, and holds it in place by what he calls the conformer—a metal shell with a circular opening in which the gold ball fits, corresponding to the cornea of the eye. The eyelids are closed over the conformer, which is left in place twenty-four hours. The results obtained by the method are perfect; no secondary trouble follows; all heal by first intention. The two stitches employed for closing the incision are taken out on the third day.

5. **Hepatic Syphilis.**—Syphilitic affections of the liver occur in a variety of ways; the occurrence of icterus in the course of lues indicates liver involvement, no definite explanation of which has been produced. That the condition is of specific nature is not probable, but upon what transitory changes, or effects of the action of the syphilitic virus, it depends, is wholly conjectural. The passive hyperemia of the liver is not a specific affection, but doubtless it arises in consequence of disease of the heart and arteries, where the poison ordinarily produces alterations leading to circulatory disturbance. There is no uniformity of opinion in regard to ascites, but the predominance is in favor of its being present in syphilitic diseases of the liver, but under certain conditions only. It may be expected in general cirrhosis, and if the portal vessels are pressed upon by gummata, constricted by scars, or obliterated by endophlebitis. In gummatous hepatitis ascites does not appear unless there is concomitant disease of the kidneys or heart, or chronic indurative peritonitis. The syphilitic inflammations are referable directly, perhaps, to the action of the specific virus or poison. Possibly the toxins are derived from the growth of some specific organism. Flexner analyzes the statistics of the Philadelphia Hospital from 1867 to 1901, and finds 88 cases of hepatic syphilis in over 5000 autopsy records. The types of the disease are the interstitial hepatic, gummatous, perihepatic and amyloid. The first made up about one-half of the cases, next to which in frequency came the gummatous form (23); perihepatitis was observed 16 times; amyloid disease 7 times. The so-called syphilitic scars were met with 38 times. It is a question whether they are to be regarded as healed gummata or not. It seems probable that these heal up, and the author reports a case indicating this. The outlook for syphilitic interstitial hepatitis is less favorable than gummatous disease, although if the condition is not advanced it is more favorable than non-syphilitic cirrhosis.

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Amyloid disease is also to be considered of serious import and yet it has yielded to treatment. The stage of infection to which hepatic lesions belong has been much discussed, and Flexner says that the profound lesions of hepatic disease will be found in association with symptoms of the tertiary stage; and while it is highly probable that the general cirrhosis appears at that time, the gummatous nodules and amyloid must belong to that period.

6. **Electricity in Renal Disease.**—Rockwell employs a high tension Faradic current, using flexible electrodes over the kidneys and currents almost as strong as can be borne without discomfort; also the static wave current in connection and alternation with the high tension Faradic current. He finds a very decided benefit from these methods, in increasing diuresis by increasing blood pressure in the organs, and in this way it is to some extent at least that its benefits are produced. He combines with the local treatment the older method of general Faradization, which is likewise efficacious but more tedious to the physician and patient.

7. **Congenital Atresia of the Anus.**—The methods of treatment in these cases are described in detail by Wilson, who concludes that the best procedure to be followed in cases of imperforation is: 1. The strictest observation of the anatomic condition present. 2. A study of the condition of the infant, relative both to the urgency which may be necessary to relieve the obstruction and its ability to withstand a second operation.

8. **Syphilis.**—Lydston points out the importance of the general hygienic management, care as to elimination by free ingestion of fluid, by baths, attention to the bowels, etc. In giving iodids he thinks the best course is often to give the daily dose in a large quantity of water and instruct the patient to drink the entire amount, a glassful at a time, at intervals during the twenty-four hours. In this way iodism may often be avoided. Digestive disturbances require attention, and sometimes experiments with the various forms of mercurial salts may be necessary to see which may be best employed. In some cases where the lesions, especially of the mucous membrane, are very resistant and the patient does not tolerate mercury and the iodids, chlorate of potassium, given in 10-gr. doses four times a day largely diluted in water, will be found very beneficial. Tonics, of course, should be employed, arsenic with the mixed treatment is useful not only in preventing iodism but in its general effect on the system. The cardinal principle in the therapy of syphilis is that the physician should remember that he has to deal with three factors: 1. A specific disease to be controlled by specific medication; 2, a distinct individual personality in each patient; 3, the results of antispecific medication.

9. **Mastoid Surgery.**—Pyle points out that in a number of cases operative methods are not advisable. If everybody was equally skilled in technique and were congestion and granulation essentially operative, we could more cheerfully recommend it. But he says under existing conditions there is not an otologist who would not trust to antiphlogistic remedies until indications were pronounced, rather than submit himself to inexperienced hands. It is wiser to counsel delay and the use of antiphlogistic measures than to encourage hasty operative procedures. The experienced surgeon with clear conception and faultless technique may save life and function, but in the hands of the many the protective and reparative processes of Nature will be abetted more and embarrassed less by rational antiphlogosis.

11. **Artificial Respiration.**—Matas' article is a very elaborate description of the apparatus modified by him for producing artificial respiration, somewhat after the Fell-O'Dwyer method, and which consists in a graduated tube which may be adjusted to any quantity of air required. It is provided with a mercurial manometer which indicates the intrapulmonary pressure and is an index to the peripheral resistance that is overcome by the insufflation, and an automatic cut-off which prevents any backward leakage of air, putting the inspiratory inflation of the lungs under the control of the operator. It is also provided with an air-filter which purifies the air and is arranged with a funnel and tube, which can be used for the administration of chloroform or oxygen, and various canulas and tubes for intubation.

12. **Foot-Wear.**—Sampson gives a statement of the scientific principles which should govern the fitting of foot-wear both for normal and various pathologic conditions. The article is well illustrated.

13. **Sugar-Forming Ferment in Suprarenal Extract.**—In view of the fact that diabetic symptoms develop in cases of suprarenal diseases, and that certain pigmentation anomalies are common to both diabetes and to the former, with the fact that an intimate relation exists between the formation of so-called bile pigments and their pulmonary pathologic pigmentation and the destruction of physiologic sugars, Croftan has been led to investigate the effect of suprarenal extract on the conversion of glycogen. This study seems to show the presence of a diastatic ferment of great power in the suprarenal glands in quantities of nearly as large a percentage as those found in the pancreas, thus justifying the deduction that the suprarenal glands are in some way concerned in the diastatic processes of the animal organism and the conversion of glycogen to sugar. It is impossible at present to decide whether the suprarenals manufacture a diastatic ferment or retain the diastatic ferment formed elsewhere in the body and carried to them in the blood and lymph stream. The effect, however, would be ultimately the same, provided the play of the inhibitory and excitatory symptomatology is correspondingly regulated. He also reports experiments on the production of glycogen following the injection of suprarenal extract in animals which show that it can cause an excretion of dextrose provided the quantity injected is sufficiently large. The effects were transitory in all cases and all the animals recovered. There was some evidence of kidney irritation shown by the presence of albumin, and the appearance of small quantities of bile pigments in the urine and local discoloration near the site of the injections are suggestive. It is desirable, he says, that the suprarenals be examined as closely as possible in all cases of diabetes that come to autopsy, and that this promises a favorable field for investigation.

14. **Obstetric Forceps.**—Abbott speaks in regard to the carelessness of some obstetric physicians in urging patients in labor who have cardiac disease or severe anemia or neurasthenia, to exert themselves unduly and suggests the use of forceps in these cases immediately after the second stage so as to prevent all straining and thus starting up cardiac or tubercular trouble.

18. **Syphilis.**—The various conditions that may give rise to trouble in the diagnosis of syphilis are noticed by White. Syphilis simulates a great many other conditions. He emphasizes the importance of not attributing too much to the presence or absence of primary lesion or the history of same. He thinks that we should have the courage to make the diagnosis of syphilis without regard to social position or moral character for it occurs everywhere. Another fault is insufficient treatment. He tells every patient that he sees for the first time with syphilis that it is a matter of three years' care at the shortest in every case; that the first year is a year of perpetual, continuous, uninterrupted treatment; that the second year may be the same or an interrupted course, according as the first year goes on under observation, and that the third year is a year of observation, but without that year and entire freedom during it from every manifestation of the disease one can not assure the patient that he is well or likely to remain so.

19. **Needless Laparotomies.**—Munro reports eight cases in which he regrets that he was led to operate, though he fears that under the same circumstances he might act in the same way again. The cases were those where apparently laparotomy was justified, but the condition turned out to be of another nature. They were 1 of acute phosphorus poisoning, 1 of hepatic cirrhosis, 2 of acute nephritis, 2 of alcoholism, 1 of obesity, and 1 of supposed pancreatic cyst.

20. **The Vagus Reflex.**—This consists in a peculiar benumbing sensation in the head due to pressure on the vagus. It has been given this name by Mays, though it has been noted by Waller as early as 1870. He reports a number of cases where it existed and was accompanied in some cases with sweating and tingling in the arms and helplessness in the lower extremities, which are hardly accounted for by the known effects on the nerves. In none of the cases except the first and second was there any marked lesion of the pulmonary organs, though from the relations that exist between vagus pain and pulmonary disease it is quite clear that the former is very frequently a premonitory symptom of the latter and therefore an important diagnostic sign and therapeutic indication.

21. **Knee-Joint Auscultation.**—The method of studying the knee-joint by auscultation is described by Blodgett, who uses the full-sized Bowles' stethoscope, with a soft rubber cap sprung over the diaphragm. He has examined 100 cases and gives illustrations of his method of examination showing the sounds elicited by dots and dashes. Most of these were normal joints and gave the normal variations of the sound. He also gives an example of the various pathologic conditions showing their variations in the sound produced. He thinks that with a trained ear and careful examination of the cases with special reference to the structural state of the knee, etc., this method may have a certain amount of value and deserves further investigation.

23. **Roentgen Rays.**—Beck describes the different kinds of injuries from the Roentgen rays, illustrating them, and reports experiments on the lower animals as to their effects in producing burns, etc. It is difficult to explain their origin, but he thinks it can best be done on the basis of clinical observation. He calls attention to the fact that burns should be treated as such and the main difference between the ordinary burn and tissue changes caused by the Roentgen rays exists in the later development of the latter. A peculiar chemical influence of Roentgen light is so exercised that the nutrition of the cells is impaired and it is only when the impairment has reached a certain degree that the burns occur and they are influenced mainly by the power and amount of the rays and the susceptibility of the patient. He thinks that from a pathologic consideration rules may be deduced for the therapeutic utilization of the rays. The most obvious therapeutic treatment is that for hypertrichosis, but he gives quite a list of disorders which he thinks may be amenable to this agent, suggesting individualizing, using tubes of low vacuum and care in each case as to individual susceptibility. He thinks there is a positive future for the method. The patient, however, should be informed of the risks of burns in any case. The treatment of the Roentgen-ray burn is the same as that of any other. For the simple dermatosis (or burns of the first degree) application of Burow's solution are most comfortable to the patient. For the bullous form (second degree) a xeroform gauze-dressing, after the blisters are opened and removed, is indicated for the first few days. Later he recommends a dressing of a 10 per cent. xeroform-lanolin ointment, which is changed daily, provided there is but scant secretion. The necrotic form (third degree) requires speedy removal of the mortified tissues, the after-treatment being conducted as wound treatment.

24. **Cystotomy, Suprapubic.**—Seven cases are reported by Lilienthal, 5 cured, 1 death, and 1 failure. He believes in suprapubic cystotomy, though he admits that it can not be applied to all cases alike, but he thinks as a general rule it should be the first step in the operative care of any form of persistent obstruction. The steps of the operation as followed by him are: 1. Washing out the bladder, leaving the catheter in; incision of the tissues through the linea alba; retraction of the recti; inflation of the bladder with air, using an ordinary atomizer bulb fixed to the catheter. Palpation of the parts through the wound; pushing up the peritoneal reflection; opening the bladder between two retracting sutures. Exploration of the viscus with the finger, then by the eye, raising the pelvis if necessary. Snipping the mucous membrane covering the most prominent portion of the prostate and enucleation of the gland with two fingers of the left hand while an assistant with a finger in the rectum supports the parts. A peritoneal opening may or may not be made, according to the necessities. He believes that with a competent nurse the bladder and the laceration in its floor can be perfectly drained with a continuous siphon apparatus without the opening from below. If perineal drainage is decided upon, however, it is easy to cut down upon the beak of a sound placed within the space left by the removal of the prostate. He prepares his patient with free purgation and diuresis, the latter being specially important.

25. **Alcoholic Amaurosis.**—A case of amaurosis due to ethyl alcohol is reported by Van Fleet, who notices the danger of wood alcohol especially. He thinks that it should be pointed out to the people that methyl alcohol is a positively dangerous substance producing even permanent blindness with sufficient exposure, and also the possibility of other forms of alcohol doing this if sufficiently concentrated.

29. **Obstetric Forceps.**—Two rules laid down by Smith are, never to use forceps until the woman has been twenty-four hours in labor if the first confinement, and twelve hours in the second or subsequent ones, unless there is some urgent indication to do so. Never use forceps to save one's own time. He thinks that in many cases injury to the mother is produced by too early employment, and he calls particular attention to the danger of using forceps when there are no uterine contractions and the possibility of injury to the child.

33. **Ectopic Pregnancy.**—From a general review of the subject Browd recapitulates as follows: ' 1. Early ectopic pregnancy runs a treacherous and uncertain course. 2. Symptoms of pain, tumor or oozing of blood are not the absolute signs of an early ectopic gestation, but their existence must be considered *cum grano salis*, and each case must be observed per se. 3. Clear history can not always be obtained from the patient, and the period of lactation will still more darken the clinical history. 4. Microscopic examination of the uterine scrapings, presence of decidual cells of chorionic villi find advocates in many observers, find also as many opponents. As regards treatment the use of the electric current has been advised, but the tendency is towards abdominal section in every suspicious case. Curetting does more harm than good in many cases of suspicious oozing. Probe puncture may be the cause of future infection. So-called suspicious cases with the suspicious tumor in the Fallopian tubes, he thinks, should not be kept under long observation until it is "to late to mend" but be operated upon at once. He draws an analogy between cases of early extra-uterine pregnancies and cases of suspected appendicitis. In both early operation is advisable. Exploratory laparotomy under present conditions gives perfect results and will be justified.

37. **Bile Pigments and Bile Acids.**—Croftan concludes his paper in this number, giving the results of experiments showing that trypsin is in part normally absorbed from the intestine, but that the greater portion reaches the liver via the pancreatic veins in the portal blood or via the lymphatics in the hepatic artery. In other words, that the internal secretion of the pancreas plays a greater rôle in the process of intracellular digestion than the external secretion. He concludes that if trypsin acts in the presence of dextrose on hemoglobin the formation of bile products may be carried on in any part of the body wherever hemoglobin is present with these substances. The burden of proof is imposed on us not to show why bile pigment and bile acids are formed in the liver, but to show why they should not be formed elsewhere. He reviews the arguments in favor of the formation of bile acids and bile pigments in the liver alone, showing what he considers to be their fallacies.

38. **The Public Unrest.**—The public tendency to have recourse to quackery, etc., is noticed by Silver, who maintains that we should seek to bring under one banner all the legally qualified members of the medical profession to combat the evil. He thinks that two lines of action are open: 1. To let things drift. He thinks the world is growing better in medi-

cine as well as in other respects and that in time these deplorable conditions will cease to exist. 2. That the State Society at its meeting propose a conference by committees with the sectarian societies, looking towards a solution of the difficulties which exist in the way of more perfect union of all the medical forces. If we should assure them that we only ask that they practice medicine in their own way and not trade upon a name, not relinquishing a conviction or demanding change of practice, he thinks, union could be quickly consummated. The main difficulty in the way is the vested interests of the medical colleges and the medical journals.

39. **Gelanthum.**—This is a thick, gelatinous, transparent, amber-colored fluid, recommended by Unna of Hamburg as a water-soluble vehicle for dermatological applications. It holds in solution 50 per cent. ichthyol, 40 per cent. salicylic acid, pyrogallic acid and resorcin, 5 per cent. carbolic acid and 1 per cent. bichlorid of mercury, thus making it of special value for the local application of those remedies which precipitate and coagulate such menstrua as traumaticin zinc-gelatin, collodion, etc. He speaks particularly of the use of gelanthum with 50 per cent. resorcin in the treatment of lupus erythematosus and reports two cases where it seemed to materially aid recovery. While two cases are not sufficient to form a correct opinion, anything that may appear to be of material benefit in this disease should be looked upon as a matter of importance.

43. **Treatment of Tuberculosis.**—Quimby divides the treatment of tuberculosis into systematic defense, calling special attention to the importance of nutrition. Diet stands first; it is only when the nutritive processes can be forced that feeding is curative. Stimulation of digestion is important. While the patient is eating, stimulation of digestion and the assimilative function is of utmost importance. He uses functional stimulants such as aromatic bitters, most frequently Warburg's tincture, also hepatic stimulants with which he combines some kind of oil. When there is necessity for strong hepatic stimulation, as shown by constipation, castor oil is chosen. When these symptoms are relieved olive oil is substituted. To attain satisfactory results he gives oil with mercury and arsenic which have a powerful and valuable influence on the processes of retrograde and constructive metabolism. The next thing is to treat the circulation. He passes by hydrotherapy as being fully appreciated, but mentions specially dry friction on the back as being remarkably efficacious in relieving pulmonary congestion and quieting respiration. He also notices the pneumatic cabinet as a valuable means of influencing both systemic and thoracic circulation, and while some have spoken of the danger of hemorrhage being thus excited we have no measure at our command for the moment to be compared with it for the arrest of existing and the prevention of recurring hemorrhages. Turning to the antagonistic forces, he refers to the mechanical ones, and says the utmost disregard for mechanical conditions in the lung, as potent destructive conditions in phthisis, is one of the most remarkable aberrant manifestations of modern medical thought. It is perfectly possible to remove retained secretions, open up collapsed and obstructed tubes and alveoli, absorb inflammatory exudates, and loosen or absorb pleuritic thickenings and adhesions by mechanical means. No treatment of pulmonary tuberculosis is rational or complete which ignores these mechanical conditions. Two possible lines of attack are available against the toxic forces, that is through the bronchi, and by the circulation. He doubts how far antiseptic drugs excreted in part by the lung affect local toxic conditions, but the testimony in their favor seems to prove they have a certain value. Direct action upon the pulmonary toxins implies the use of antiseptic inhalations, and while they do not arrest them they do diminish pulmonary infection. The great danger in their use is attempting too much. The agent chosen should be as little irritant as possible. For this he uses nothing but alcohol, formalin and ozone with various balsams for flavoring. Whatever the antiseptic, it should be given by cold vaporization and he finds this result most satisfactorily accomplished by wetting cloths with formalin and hanging them in the chamber. Anyone persisting in the use of such a measures, he believes, will find that the case does better with than without it. The secondary or toxic conditions in toxemias are not to be overlooked and justify regular flushing of the colon with small antiseptic solutions in every case of tuberculosis. Frequently fever and febrile exacerbations, etc., will be found to depend solely on infection from the colon.

44. **Surgery and Tuberculosis.**—Le Boutillier reviews the surgical treatment, finding but little in favor of the injections into tubercular pulmonary foci; they have been practically abandoned. The testimony appears to be that good results have followed the Murphy method of introducing nitrogen gas. Fit cases for extirpation are only those in which there is a single small lesion, and as good hygienic treatment is often sufficient for these, operative measures do not arouse much enthusiasm. However, surgery may come in play in complications such as pulmonary hemorrhage, pneumothorax, and incision into the cavities may be of advantage in some cases, such as where there is a single moderate-sized cavity and little other pulmonary involvement, and the general health is good. Here it is simply a case of draining a septic focus and while there is opposition to the course there is still some reason for its practice. In these cases of cavities the nitrogen method should be given a trial unless pleuritic adhesions are such as to prevent its efficient action. Tuberculous empyema, of course, calls for early surgical intervention.

45.—See abstract in THE JOURNAL, xxxvii, p. 1337.

48.—See abstract in THE JOURNAL, xxxvii, p. 137.

55. **Chronic Gastric Catarrh.**—The two lesions which require therapeutic treatment are, according to Ewald: 1, diminution in the secretion of HCl and pepsin; 2, weakening of the motor function of the gastric musculature. The disturbance of the secretory function of the gastric mucosa can be met in no better way than by the administration of HCl, given in sufficient doses so that the deficiency will be fully compensated for. He administers three times after each meal at intervals of ten minutes as many drops of HCl in a glass of water as the patient can bear, that is, without having too sour a taste in the mouth, but this does not bring the stomach contents up to the normal. He thinks it may be better to introduce with a stomach tube a 0.2 per cent. solution of HCl. He has given as much as 300 c.c. of such a solution twice daily after the two larger meals and has seen excellent results follow. In recent years he has not prescribed pepsin because its secretion does not suffer in the same measure as that of the acid. With this treatment he also employs remedies which directly excite the activity of the gland cells, such as bitters, particularly condurango, which he specially prefers in infusion: 20 or 30 grams infused in 300 c.c. for 12 hours and evaporated to one-half that quantity by gentle heat. He advises this at the same time with some other remedy which increases the gastric motility and none here is as efficient as strychnia in the form of tincture of nux vomica. He puts 5 grams of tincture with 5 grams of HCl into the above infusion. Massage when skillfully performed, but only then, is valuable; he uses electricity by the intragastric method. Turck's pneumatic gymnastics of the stomach has not been tried by him, but he has the gyromele and though it appears dangerous he has never seen any bad effects from it. It should be used, however, with caution, for fear there may be some latent ulcer. The needle spray described by Einhorn has also been used by him. For removing fermenting masses he advises gastric lavage and internal antisepsis to limit the production of new fermentation. For this he employs resublimated resorcin, giving it in combination with bismuth salicylate, that is, 5 grams of resorcin, 10 of bismuth salicylate, with 15 each of bicarbonate of soda and sugar. The dose is a small teaspoonful every two hours. This does not interfere with the other remedies mentioned. Regulation of the bowels and diet is also mentioned. Meals should be moderate; the patients should not eat to a full satiety. Drinks should be always lukewarm; strong alcoholic and carbonated drinks should be excluded. Proper care of the teeth and mastification should be attended to and food selected that will be pen-

etrated by the gastric juices, excluding therefrom hard-boiled eggs, fat meats, and fat cheeses. The so-called red meat is sometimes bad on account of the high percentage of salts. The manufactured foods and those prepared from milk can be used to advantage. Fresh bakery products should be avoided and carbohydrates used with care. Milk is theoretically the best food, but it does not agree with everyone, but he speaks well of the use of evaporated and pulverized milk of which 100 grams correspond to about 1 liter of milk as being of value.

57. **Ischio-Rectal Abscess.**—Martin first discusses the anatomic data and the causes of the infection and calls attention to the fact that every abscess of the ischio-rectal form, if left untreated and in some cases with the best of treatment, will result in some variety of fistula. Conversely, every fistula is the result of an abscess, hence the importance of early diagnosis and treatment. He calls attention to the fact that many physicians who are punctilious in other points neglect examination of these parts. The symptoms alone should suggest that the case is of an inflammatory nature and not one of hemorrhoids. A throbbing pain felt at one side of the anus, difficulty in sitting, sleeplessness, impairment of sexual function, etc., with reddening of the skin and swelling, and if the disease is seen late fluctuations, are characteristic. He condemns positively the use of hot poultices, and in most cases much trouble will be avoided by thorough divulsion of the sphincter muscle. He administers hyponitrous oxid in these divulsions, as the patient reacts quickly and does not have to be confined to bed afterwards. In operating on these abscesses local anesthesia is always used and he operates by making a long incision through the long axis of the abscess extending into the healthy tissue at each end and connects this with one from its middle in T-shape and takes out a large piece of triangular tissue, curetting out the necrotic tissue, having the cavity swabbed with carbolic acid or tincture of iodin, and packed with pledgets of absorbent cotton saturated with acetanilid ointment, 1 gram to the ounce. After applying a generous pad of cotton held in place by a T-bandage the patient is left to his resources until subsequent dressing. The wound is left to heal by granulation; the mistake is in allowing the skin to heal before granulation is complete in the deep parts of the cavity. Every portion of the wound should be probed at each dressing to break up adhesions and discover any new sinuses. He sums up by giving the following six short rules: "1. Examine your patients carefully. 2. Do not use poultices. 3. Operate immediately. 4. Give plenty of room for drainage. 5. Employ a local anesthetic wherever possible. 6. Do not neglect your patient after operation."

60.—See abstract in THE JOURNAL, xxxvii, p. 853.

64.—See abstract in THE JOURNAL, xxxvii, p. 1410.

65. **Tetanus Following Aseptic Celiotomy.**—Coe reports a case of tetanus occurring in a patient after apparently aseptic celiotomy. He goes over the literature to some extent and summarizes that it is a rare and peculiarly fatal complication of abdominal section and since the site and mode of inoculation are practically unknown, intelligent prophylaxis is impossible. When a sporadic case occurs in a hospital, not only should extra precautions be used to secure rigid asepsis, but the air of the operating room should be examined and purified by fumigation, with cleansing of the floors, walls and ceilings. Preventive inoculation should be employed for several days after the outbreak. It is hopeless to try to locate the site of infection and to destroy the bacillus at this point in abdominal section. The efforts of the surgeon should be directed to diluting and neutralizing the poison by injecting into the blood large quantities of normal salt solution containing the serum. While subdural injections are safer and are probably as efficacious as intracerebral, these cases are so desperate that we should not shrink from any measures which promise immediate relief.

66. **The Angiotribe.**—The instrument and his method of operation are described by Ellis, who finds that it has many important functions. It is inapplicable to control hemorrhage in sections or wounds of the substance of such friable organs as the liver, spleen, or kidney, but its utility in retro- and transperitoneal nephrectomy and in splenectomy is evident. Its hemostatic action is serviceable in gastrectomy and in fact it can be utilized to advantage in any operation of any magnitude in the abdominal and pelvic cavities and is especially useful in vaginal hysterectomies and also supra-vaginal hysterectomies. For the removal of adnexa or excision of the small ovarian ligamentous cyst it can be absolutely depended upon for hemostasis. He thinks it is not useful in complications of the appendix when the stumps can be satisfactorily dealt with after other methods, but it is frequently serviceable in the management of redundant meso-appendix. Its value is not confined to abdominal operations. He has found no better method than this for the operation of thyroidectomy and it has done him good service in many other operations, such as castration, operation for elephantiasis and for hemorrhoids. Its use, of course, in the treatment of vascular pedicles is noted and recommended with certain limitations, but small supplementary ligatures are of value, against the possibility of secondary hemorrhage.

67.—See abstract in THE JOURNAL, xxxvii, p. 1695.

68.—Ibid., p. 1410.

69. **Curettage.**—Hyde summarizes the limitations for dilatation and curettage as follows: As a possible factor to overcome sterility: The operation is only warranted when based on tenable premises, the competency of the husband, the absence of any serious adnexal lesions, incomplete development of the genital organs, vaginismus, or malformations. Excluding or correcting these, the operator should certainly dilate or curette. It also offers relief in many cases of menorrhagia or metrorrhagia and is of great benefit for increasing the patency of the canal in some small anteflexed uteri. For securing scrapings for diagnostic purposes it is of decided value. In removing retained secundines the question is whether to employ a sharp or dull curette. He prefers a large, sharp one, and has seen as profuse a hemorrhage follow the use of the blunt curette as the other. As a preliminary to certain operations on the uterus before a trachelorrhaphy, before hysterectomizing cancerous uteri, or section to relieve posterior adherent uterine displacements, etc., it has its value, but he condemns especially the rough curette before trachelorrhaphy. He does not believe in packing the uterus after a simple curettage. The only time he packs is in the presence of persistent or alarming hemorrhage after removal of retained secundines; ordinarily there is no need for it. For removing septic foci, its utility has been much debated. If general sepsis is present he doubts the advisability of the curette. If there is septic material, pus foci, or retained placenta, it would seem that they ought to be removed by gentle curettage, not attempting to reach "hard pan." A few of the contra-indications are inexperience, and the presence of inflammatory conditions. He wants to say that it is not a simple operation, but one that may be attended with the gravest dangers; that not enough attention is directed to pelvic conditions before curettage; that the indications for it are positive and the contra-indications should always be considered. Finally, that the operation demands experience, thorough asepsis and knowledge that severe accidents may occur at any moment even to the best operator.

72.—See abstract in THE JOURNAL, xxxvii, p. 1410.

78. **Rare Papular Disease.**—Fox reports a case where there was hard papular eruption with severe itching in the axillary region and to a less extent over the pubic region. The suffering of the patient was extreme and insomnia marked. Very little relief was obtained by treatment. The histologic changes consisted of hyperkeratosis involving chiefly the sweat-duct orifices, their intra-epidermic portions and the orifices of the hair follicles, with consecutive hypertrophy of the stratum spinosum (acanthosis) surrounding the altered sweat ducts and hair follicles. With this there was mechanical dilatation of the coiled glands which result in changes in their epithelial lining and inflammatory changes of a more or less chronic character in the derma. The histological picture was similar to that seen in porokeratosis as is shown by the illustrations.

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82. **Club Foot.**—McKenzie reviews the anatomical conditions and claims that the proper time for operating is about the time the child begins to walk. Then the steps to be taken will depend much upon the resistance offered. In some cases the correction may be fully rectified by the hand and fixed dressing. Assuming always that the deformity of the foot *per se* has been over-corrected, attention should be given to the equinus, and here section of the tendo achillis is almost invariably required. He describes his method of cutting through the tendon subcutaneously and the plantar fascia, the internal lateral ligament and sometimes the long plantar ligaments. When the skin offers definite obstruction to further replacement he refrains from further correction and applies fixation dressing and after several weeks it is ready to yield, and another correction may be made. Dr. Phelp's open section is not, he thinks, advisable. In any case the most frequent operation required than correction that can not be made readily with the hand is severance of the plantar fascia. This should be done close to the os calcis attachment and the long plantar ligament may be reached and cut in the same operation where one enters behind the arteries and hemorrhage is not troublesome. If the obstruction appears to be much more toward the inner border of the foot the tendon of the tibialis posticus may be cut simultaneously, which must be done just below and anterior to the internal malleolus. The next obstruction most likely to need the attention is from the internal lateral ligaments of the calcaneoscaphoid. The tenotome may be so introduced as to pass parallel to the artery, and extensive section be made without causing much hemorrhage. This is all the knife is required for in the vast majority of cases. Manipulations with the hand or wrench usually suffice; the latter may be required in adults. Great importance is attributed to the dressing. Absorbent cotton should be applied so that the plaster dressing can be put on without causing abrasion, and the foot held in the position as nearly approaching correct position as possible. The pressure should be even to avoid sloughs and the dressing allowed on from two to six weeks, when it should be removed, and after a couple of days a second one applied, the two days being utilized in removing the oid epithelium by bathing. Nearly always in this way, he says, the deformity can be corrected in two to four dressings, and after the removal of the last one boots should be worn in daytime, and night braces every night.

85. **Scarlet Fever.**—The rigid adherence to the following suggestions will, according to Ames, eradicate scarlet fever: "1. Every suspected case should be promptly isolated until the diagnosis can be positively confirmed. 2. After confirmation, make isolation absolute, and report the case to the health department. 3. Instruct the family to keep the patient isolated until all signs of peeling are invisible. 4. All members of the family who desire to leave the house must do so the first day after their clothing has been disinfected. This will take six hours, as all their apparel must be placed in a sealed room and exposed to formaldehyd gas for at least that length of time to insure public safety, and they must remain away until quarantine is removed. 5. No person should leave the infected area after fourteen days' continuous exposure, unless the sick patient is free from desquamation. 6. The attending physician should have as little contact as possible with the patient; cleanse his hands thoroughly, and disinfect his clothing before entering another house. 7. The character and duration of the isolation must be left to the public health department. Thorough disinfection with formaldehyd, 10 ounces to 1000 cubic feet, the germs having now been corralled, will destroy them and thus end the existence of the disease."

87. **Myasthenia Gravis.**—Sneve reports a case of this condition and reviews the literature. He suggests that its location must be in the cortex of the brain and thinks it possible *that* thorough examination and more knowledge of the normal, chromoplasmic structure and the function of the neuroglia will reveal the changes, which will not only clear up the pathology of this affection, but will also help us to understand better the phenomena of sleep, hysteria, hypnotism and allied states. Critical blood examination by an authority threw no light on the subject in his case, though the abundance of large lymphocytes was of interest. He holds that electricity is indicated as well as exercise and cold bathing under the watchful eye of the physician, though the exhaustion of the muscular system by electricity might be very dangerous; hence arises the necessity of mild applications and great caution in the use of these methods. In conclusion he calls attention to the quite similar physiologic action of curare to the disease in question.

88. **Anesthetics.**—From an extensive experience in nine years' practice as an anesthetist, Magaw has come to believe more in the ether-drop method in the majority of cases as the safest, though perhaps a little more troublesome to the operator. The use of chloroform which has been tried in all sorts of cases is considered rather more dangerous. Nitrous oxid gas as a preliminary to ether has been tried, but the benefit seemed to be slight. The main thing to recommend it is that the patient seems to lose consciousness more quickly. For short minor operations nitrous oxid gas is far superior to either chloroform or ether. All patient are anesthetized in the operating rooms, merely giving the operator time to prepare. The inhaler used is the Esmarch, with two thicknesses of stockinette, changed after each patient. In giving ether she commences with the drop method slowly and carefully with as much air as though it were chloroform, until the patient's face is flushed, when she uses a large piece of surgeon's gauze of several thicknesses and keeps adding a few more pieces of gauze until the patient is asleep. The gauze is then removed and the anesthetic continued with the same covering as at the first. If any degree of rigidity persists the patient is not etherized. She considers touching the conjunctiva a dangerous practice, as it might infect the eye. In the condition of complete anesthesia respiration should be regular, inspiration deeper and often accompanied by snoring, expression peaceful, eyes closed, and all the muscles relaxed. For quick breathing or profuse secretion of mucus, lift the mask and allow several breaths of fresh air. Then continue with the ether. In gall-bladder work especially, the patients are sometimes noisy, as coming in contact with the diaphragm causes an increased and irregular respiratory rhythm which is mistaken for an indication for more anesthesia. If the patients have already reached surgical anesthesia this irregular respiration and grunting does not interfere. There is no need of increasing the dose. The same symptoms may follow operation on the sphincter muscles. Patients who have had peritonitis require almost a dangerous amount of anesthesia to produce relaxation of the abdominal rigidity. In cases of the tongue falling back raise the lower jaw up and forward, not using the tongue forceps, but catch the tongue with a piece of gauze and draw it out and up toward the nose and a little to one side, and withhold the anesthetic. In alcoholic cases and operations on the stomach 1/8 of a grain of morphin before operation may carry the patients through better and with less ether. Chloroform should be given with more air and less quantity and with the regular drop instead of the stream. It should be slowly and carefully given, the pulse being taken at the facial and temporal arteries. The anesthetist should never allow himself to be hurried. The mask should always be held so that the patient can get a liberal supply of air while administering chloroform to avoid choking and struggling, and any irregular and shallow respiration should lead to the prompt withdrawal of the mask. A rapidly dilated and fixed pupil always indicates danger, while a pupil contracted to normal size or a little less indicates surgical anesthesia. Blanching of the lips, ears and nose show the need of more air. All these symptoms should be watched and no one of them relied upon. Statistics are of very little consequence as to the amount of ether and chloroform required. Just as much is needed as will do good work and not a drop more. In giving nitrous oxid a dental apparatus is used. The change to ether is made quickly, ether is crowded, air excluded, the gas abandoned altogether. The Esmarch mask is used for this purpose with several thicknesses of gauze for a closed cone, and after the patient is fully under the drop method on the orig-

inal cone. To prevent after-vomiting various things are recommended, but since only about 40 per cent. have this symptom it is hardly worth while to submit all to such remedies as vinegar and saline solution.,

102. **The Cortical Function.**—Wright's article is an argument for antimaterialistic views in regard to the functions of the brain, and criticises text-books for using such expressions as idea cells, centers for emotion, attention, etc. The point he specially emphasizes is that the function of the brain is to transmit impulses and impressions only and that intellectual processes are carried on independent of the brain cells entirely. This view, he holds, aids us in the solutions of many of the problems that confront us. Psychology as well as physiology must be drawn upon to understand the functions of the brain cortex.

118. **Yellow Fever.**—Oliver's article is a plea against the theory of the exclusive transmission of yellow fever by the mosquito and in favor of the fomites theory and the necessity of quarantine.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below.

The Lancet (London), January 11.

1 Some Diseases Incidental to School Life in New Zealand, with Suggestive Methods for Combating Them. G. R. Saunders.
2 Acute Suffocative Pulmonary Edema. John Lindsay Steven.
3 Mental School Hygiene. Francis Warner.
4 *Volkmann's Contracture. Leonard S. Dudgeon.
5 *Some Figures as Regards Susceptibility to Revaccination. F. W. Andrewes.
6 A History of the After-Progress of Five Cases of Partial Gastrectomy for Cancer of the Pylorus. J. Rutherford Morison.
7 Nevus Verrucosus Associated with Certain Anomalies of Pigment. H. Taylor.
8 A New Method of Breaking Down Recent Adhesions. George W. Ord.
9 Successful Removal from an Infant of an Occipital Meningocele Larger Than the Child's Head. J. Lynn Thomas.
10 An Unusual Complication of Influenza. J. G. Carruthers.

British Medical Journal (London), January 11.

11 Maternities and Pre-maternities. J. W. Ballantyne.
12 Early Extra-uterine Pregnancy. Thomas Carwardine.
13 Tubal Gestation with Rupture and Hemorrhage into the Peritoneal Cavity. J. N. Marshall.
14 Hysterectomy for a Soft Fibromyoma Weighing 53 Lbs. Frank C. Madden.
15 The Treatment of Puerperal Eclampsia. Louis A. Francis.
16 *A Suggestion for the Treatment of Enuresis in Females. G. C. Parnell.
17 Hydros Gestations Due to Staphylococcus Albus. Nathaniel W. Holmes and W. Bulloch.
18 *Note on a Method of Quantitatively Estimating the Phagocytic Power of the Leucocytes of the Blood. W. B. Leishman.
19 Epidemic Catarrhal Jaundice. Eliot Curwen.
20 Enteric Fever in the Inoculated. C. Birt.
21 Tortuosity of Both Internal Carotid Arteries. R. P. Rowlands and R. H. J. Swan.

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32 Malignant Disease of the Lips. L. Janowsky.—"Zur Frage des Lippenkrebses. Klin. und Stat. Material a. d. Krankenhause Kaiser Nicolai II."
33 *Tuberculosis of the Lymph Glands. B. K. Finkelstein.—"Beitraege zur Frage der Tuberkulose der Lymphdrüsen."
34 Two Cases of Fracture of the Spine. J. S. Spiridonow.—"Zwei Fälle von Fractur der Wirbelsäule in path.-anat. und klin. Hinsicht."
35 *Diagnosis of Tubercular Peritonitis in Children. A. A. Kissel.—"Ueber die Diagnose der tuberkulösen Peritonitis bei Kindern, auf Grund von 54 Fällen eigener Beobachtung."
36 *General Contraction of the Stomach and Jejunostomy. M. v. Cackovic.—"Ueber totale Verkleinerung (Schrumpfung), des Magens und uber Jejunostomy."
37 *Partial Resection of Spleen with Hemostasis by Steam. W. F. Snegurieff.—"Ein Fall von partieller Resection der Milz unter Anwendung des Wasserdampfes als Blutstillungsmittel."

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38 Quinin Lygosinate as a Styptic and Antiseptic. J. Hevesi.—"Chininum lygosinatum, ein neues Wundbehandlungsmittel."
39 *Method of Orchidopexy. E. Hahn.—"Eine Methode der Orchidopexie."

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42 Critical Days and Action of Cosmic Influences on Pathologic Occurrences. H. Brunner.—"Ueber kritische Tage und kosmische Wirkungen auf path. Ereignisse."

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43 The Plague. W. Kolle and E. Martini.—"Ueber Pest." (Continued.)
44 *Critical Study of Glycolysis. E. Bendix and A. Bickel.—"Kritischer Beitrag zur Lehre von der Glykolyse."
45 Can Pernicious Anemia Be Diagnosed from the Blood? E. Körmöczi.—"Kann die Diagnose der Anemia perniciosa aus dem hämatologischen Bilde festgestellt werden?"
46 *Theory of Traumatic Genesis of Tumors and Cured Case of Sarcoma of the Tibia. V. Schmieden.—"Ueber den Werth der Theorie von der traumatischen Geschwulstgenese und über einen geheilten Fall von centralem Riesenzellensarkom der Tibia."
47 *Temporary Colostomy in Case of Chronic Dysentery. A. Nehrkorn.—"Temporäre Colostomie bei Chronischer Dysenterie."
48 Case of Lateral Hermaphroditism. B. O. Kellner.—"Ein Fall von Hermaphroditismus lateralis."

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49 *Remote Results of Exclusion of Intestine. Wiesinger.—"Ueber Dauerresultate bei Darmausschaltung."
50 Four Cases of Sporadic Elephantiasis. L. W. Orlow.—"Ueber die sporadische Elephantiasis."
51 *Nerve Grafting. F. Dumstrey.—"Ueber Nervenpfropfung."
52 Subcutaneous, Intraperitoneal Injuries of the Kidneys. F. de Quervain.—"Ueber subcutane, intraperitoneale Nierenverletzungen."
53 Study of Unna's Plasma-cells. Enderlen and Justi.—"Beitraege zur Kenntniss der Unnaschen Plasmazellen."
54 Catheterization of Ureters and Radiographie. Géza v. Illyes.—"Ureterkatheterismus und Radiographie."
55 Surgical Treatment of Ascites. H. Ito and K. Omi.—"Klinische und experimentelle Beitraege zur chirurgischen Behandlung des Ascites."
56 Radiography as Aid to Diagnosis of Renal Calculi. K. Dohrn.—"Das Roentgenbild als diagnostisches Hilfsmittel zum Nachweis von Blasensteinen."

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57 Multiple Sclerosis of Central Nervous System. J. Hoffmann.—"Die multiple Sklerose des Centralnervensystems."
58 Pathologic Anatomy of Hemiathetosis. H. Haenel.—"Zur path. Anat. der Hemiathetose. Zugleich Beitrag zur Kenntniss der a. d. Vierhügelgegend abstelgenden Bahnen beim Menschen."
59 Five Cases of Tumors in the Cerebellum. G. v. Voss.—"Fünf Fälle von Kleinhirntumor."
60 Symptom-Complex in Affections of Posterior and Lateral Columns. G. Bikeles.—"Zur Kenntniss des Symptomencomplexes bei disseminirter Hinter-Seitenstrangerkrankungen (auf Grund von Befunden in Fall von Meningo-myelitis)."
61 Study of Innervation of Bladder, Rectum and Genital Apparatus. L. R. Mueller.—"Klinische und experimentelle Studien ueber die Innervation der Blase, des Mastdarmes und des Genitalapparatus."

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62 *Study of the Heart by Means of the Orthodiagraph. Moritz.—"Ueber orthodiagraphische Untersuchungen am Herzen."
63 Experimental Study of Hemolysis. Max Matthes.—"Experimenteller Beitrag zur Frage der Haemolyse."
64 *Further Experience with Silk Tendons. F. Lange.—"Weitere Erfahrungen ueber seidene Sehnen."
65 *Subcutaneous Gelatin Injections in Melena Neonatorum. Holtschmidt.—"Die Subkutane Gelatineinjektion bei Melæna neonatorum."
66 *Treatment of Rupture of the Uterus. G. Wiener.—"Beitrag zur Therapie der Uterusrupturen."
67 Biology of Fat. G. Rosenfeld.—"Die Biologie des Fettes."
68 *Esophagoscopy, Gastroscopy and Celioscopy. G. Kelling.
69 Go-Carts for Paralysis of the Legs. C. Bruns.—"Ueber Anwendung von Laufwägen bei Lähmungen der unteren Extremitäten."
70 Teaching of Materia Medica. M. Chetta.—"Ueber den Unterricht in der Arzneimittellehre."

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71 *Sciatica, Meralgia and Flat-Foot. J. Pal.—"Ischialgia, Meralgia und Plattfuss."

72 Pathogenesis of Choked Disc in Cases of Brain Tumors. Elschnig.—"Die Pathogenese der Stauungspapille bei Hirntumor." (Continued.)

73 Pathologic Anatomy of Family, Infantile Spastic Spinal Paralysis. E. Bischoff.—"Die path. Anatomie der infantilen familiären spastischen Spinalparalyse."

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74 *Intestinal Myiasis from Maggots. H. Schlesinger and A. Weichselbaum.—"Ueber Myiasis Intestinalis (Die Fliegenlarvenkrankheit des Verdauungscanales)."

75 Intestinal Bacteria that Form Granulose. F. Passini.—"Ueber granulosebildende Darmbacterien."

76 Importance of the Iodin Reaction for Bacteriologic Diagnosis. R. Grassberger and F. Passini.—"Ueber die Bedeutung der Jodreaction für die bacteriologische Diagnose."

77 Etiology of Pneumothorax in Childhood. Zuppinger.—"Zur Aetiologie des Pneumothorax im Kindesalter."

78 *Treatment of Fissure of the Anus. Gussenbauer.—"Ueber die Behandlung der Fissura Ani."

79 Ulcus molle and Syphilis. E. Finger.

80 Hemagglutinins of Normal Sera. K. Landsteiner and A. Sturli.

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81 Appendicitis. I. I. Metchnikoff.—"Nyeskolko zamechanie o vospalenie cherveobraznago otrostka."

82 Cardiac Cirrhosis of the Liver and its Importance in Differentiation and Treatment. S. V. Levashoff.—"O Serdetchnix cirrhozax pecheni e o znatchenie ix dlya raspoznavanie e lyetchenia serdetchnix porokov."

83 *Indications for Operative Intervention in Perityphlitis. H. F. Zeidler.—"O pokazaniax k operationomu vmyeshatelstvu pre perityphlitye."

84 Simultaneous Invasion of Rectum by Cancer and Tuberculosis. A. F. Mankoffsky.—"K voprosu ob odnovremmenom porazhenie pryamoy kishky rakom e bugorchatkoy."

85 *Serodiagnosis of Tuberculosis. G. N. Kazarinoff.—"K voprosu o serodiagnostikye bugorchatky."

86 Prevention and Treatment of Plague. V. P. Kashkadamoff.—"Predupreshdenie e lyechenie chumi."

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4. **Volkmann's Contracture.**—This phenomenon consists in contraction of the fingers and sometimes of the wrist, coming on rapidly with loss of power, though not absolutely, in the forearm muscle after a severe injury, usually in the region of the elbow joint, and generally in young children. The deformity is due to changes in the flexor muscle without injury to the peripheral nerves, caused in many cases by tight bandaging and pressure of splints. In some cases, however, splint pressure may have no effect, and Dudgeon thinks it is far more probable that it is the result of a combination of large effusion in the soft parts with splint pressure in most cases. The great feature in the history of a case of this deformity is the onset of paralysis of the limb, with contracture. The fingers sometimes become blackish and frequently swell. There is rarely any pain until after the removal of the splint when the forearm sometimes is tender. There is often sloughing of the skin, usually in the middle or upper part of the flexor surface of the forearm. The fingers are at first simply flexed, but soon pass into the characteristic position. "With the wrist extended the metacarpo-phalangeal joints are extended also; the interphalangeal joints of the fingers and the terminal joint of the thumb are, however, strongly flexed, so that the tips of the fingers touch the lower part of the palm, and no reasonable amount of force seems capable of straightening them; but as soon as the wrist-joint is flexed to a right angle then the interphalangeal joints can be easily extended. In very bad cases the wrist becomes strongly flexed, and is incapable of extension. The hand is pronated, and the forearm is generally semi-flexed. The flexor muscles of the forearm seem hard, firm, and much wasted. A thickening is sometimes felt in the soft tissues, usually in relation to the pressure sore which is so frequently present. A swelling, bony in character, is sometimes to be found at the lower end of the humerus, generally at the inner side. Sensation may be normal, or there may be partial or complete anesthesia; this is dependent on the condition of the peripheral nerves. There are thus to be seen usually three grades of this deformity: 1, partial contraction of the fingers; 2, the hand in the typical position; and 3, strong flexion of the wrist and fingers, without any power of extension. There are no true trophic lesions in pure ischemic myositis, but the hands are frequently cold and blue and the skin smooth. The fingers frequently swell when the arm hangs down by the side for some time. It is said that the joints become ankylosed, similar to the ankylosis in traumatic arthritis, but I could find no such case in the literature or any mention of such a condition having been recorded; in those cases in which any reference was made to the joints they were always said to be normal. In well-marked cases there is as much shortening of the bones as is met with in acute anterior poliomyelitis, etc." Normal electrical reactions are characteristic. The pathology of the condition according to the different authors is reviewed. It is shown that it may occur after severe cold, and possibly there may be an escape of synovial fluid with blood, producing deformity in some cases. The condition of the muscles when examined by the surgeons in operations shows them wasted, pale, firm and dry, and that they have undergone a sort of fibrosis. The differential diagnosis as distinguished from ulnar, median or muscular spiral paralysis, poliomyelitic contraction, Little's disease and the so-called functional disease, is noticed. Dudgeon does not believe in the bad prognosis claimed by Volkmann for this condition. Some of his cases have recovered, and he agrees rather with Anderson, whose opinion is directly contrary to that of Volkmann, that the affection may be generally retarded by the systematic active and passive movement with massage, with, if necessary, the galvanic current. He advises the delay of any surgical operation for such condition for some time, at least three or four months.

5. **Revaccination.**—Andrewes analyzes the statistics of the revaccination of the female staff of St. Bartholomew's Hospital. He finds that a very large percentage of those previously vaccinated had good vaccination results. Among the ward maids and domestic servants, who for the most part had not been vaccinated since infancy, there was true vaccinia in 76.36 per cent.; imperfect vaccinia, 20 per cent.; and negative results in 3.64 per cent. Among the 88 nurses who had been vaccinated on beginning of their employment, there were 27.27 per cent. of perfect vaccinia; 54.54 per cent. of imperfect vaccinia and 18.18 per cent. of negative results. Among the senior nurses and ward sisters who had been long in the service and not recently vaccinated there were 40 per cent. perfect vaccinia; 40 per cent. imperfect and 20 per cent. of failures. Of 61 cases who had not been successfully vaccinated since infancy there were 81.96 per cent. of perfect vaccinia; 13.11 per cent. of fair vaccinia; 1.66 per cent. feeble vesicles, and negative results in only 3.32 per cent. The results indicate the necessity of revaccination, and that during the third decade of life some 80 per cent. of those vaccinated in infancy are most imperfectly protected against smallpox. As regards those who have been revaccinated, individual susceptibility plays an important part, and some are so susceptible as to require revaccination after six or seven years. He thinks investigation along this particular line is desirable, for there seems to be a dearth of accurate information in regard to the matter.

16. **Enuresis.**—The suggestion of Parnell is to employ a strong solution of silver nitrate to the neck of the bladder and urethra, a plan he has found mentioned only in Holmes' "Surgery." He reports two cases. In order to bring the solution more thoroughly in contact with the urethral canal he has devised a small dilator with straight blades, which is very effective. No oil or ointment should be used, but the blades should be moistened with distilled or sterilized water and, after the urine has ceased, a little ointment smeared over the outer parts, and a probe well armed with cotton wool saturated with the solution passed between the blades and withdrawn two or three times. The instrument is then removed and again inserted at right angles with the former position, the urethra again dilated and the swab applied so as to ensure that the whole of the canal comes in contact with the solution. He attributes considerable importance to the moral effect of the treatment. He has not complicated its results by the administration of drugs, but thinks it might be still better with proper medication. He suggests the effect of the mechanical action caused by the slightly swollen urethra after treatment, but the real value is the breaking down of the bad habit for a week or more.

18. **Phagocytic Action.**—The method recommended by Leishman aims at enumerating the number of bacilli or cocci phagocyted within a definite time by the polynuclear cells of the blood under examination, obtaining the average of these variations and comparing the results with that of the control blood, preferably that of the observer, put up under identical conditions. He makes agar emulsions of the germs he desires to investigate, insuring the normal distribution through the emulsion. He adds a measured volume of blood to equal the volume of the emulsion on a slide or watch glass. This is transferred to the prepared slide and covered by a cover glass and precisely the same procedure is gone over with the control blood. The slides are then placed in moist chambers and left in an incubator at 37 C. for one-half hour. The blood under the cover glass remains liquid for hours and the phagocytes have a chance to exercise their power on the surrounding germs. At the end of half an hour the slide is removed and prepared for staining, loosening the dried edges with a little normal salt solution, and removing the cover glass, when the films are dried in the incubator for a minute and stained for the microscopic examination. He uses a staining method devised by himself and published in the *British Medical Journal* of September 21, 1901, and finds little difficulty in enumerating the number of germs contained in each phagocyte. The method is, he says, obviously far from the ideal one. The dilution of the blood with salt solution, variations in the number and possibly the virulence of the germs introduced, and, perhaps, the variation in the phagocytic power of the observer's blood from day to day are some of the objections, but the results so far obtained have proven surprisingly regular and the identical conditions of the blood under examination and the control blood at least partially annul the effects of variations due to differences in the number and virulence of the germs. He reports some of his observations, which indicate that the method has some particular value.

25. **Irrigation of the Intestines with Hydrogen Dioxid.**—Roger has witnessed remarkably prompt cures of dysenteriform colitis treated by one to three injections a day of a pint or a quart of diluted hydrogen dioxid, after the failure of other measures. The violent pains disappeared after two injections; the diarrhea was arrested and the fever declined. He considers this lavage of the intestines an extremely valuable measure in all cases of excessive putrefaction in the large intestine. On account of its hemostatic properties it might be found useful in hemorrhagic affections of this portion of the intestines. Rocaz has recently advocated it and described its successful application in cases of acute dysentery in children. Roger states that the result of this treatment is also encouraging in muco-membranous colitis, although less striking than in the other variety. He prepares the fluid fresh for injection by adding 100 c.c. of a 12 volume hydrogen dioxid to 900 c.c. of water containing in solution 5 gm. of sodium chlorid, 3 gm. of sodium phosphate and .5 gm. of sodium bicarbonate. It is injected into the colon through a flexible sound under weak pressure.

26. **Medical Treatment of Menstrual Troubles of Utero-Ovarian Origin.**—Vidal remarks that many utero-ovarian affections are due solely to disturbances in the innervation or circulation of the parts, and medicinal and surgical treatment is powerless in these cases. They require physical measures to act on the vasomotor centers, air, sunshine, electricity, mechanotherapy, hydrotherapy and especially mineral waters. The last mentioned have a physical, chemical and dynamic power in these cases, which very few persons appreciate at their true value. They stimulate the nutrition, as can be seen by the increase of urea, phosphates and chlorids in the urine, while the uric acid diminishes. This local and general action is particularly successful in combating menstrual disturbances, whether amenorrhea or metrorrhagia predominates.

27. **Extraction of Metallic Foreign Bodies in Air Passages with the Magnet.**—De Roaldés has been making a special study of the technique of removing metallic foreign bodies from the upper air passages, since he first suggested the use of the magnet for this purpose at a meeting of the Louisiana State Medical Society in 1899. Garel of Lyons recently removed a small nail in this way from the right bronchus, at the sixth interspace, through a tracheotomy wound. The distance between the magnet and the nail was at least 5 or 6 cm. De Roaldés has had no opportunity to practice his technique, but he has established by numerous experiments on the cadaver, that a metallic foreign body in the nose or nasopharynx promptly emerges when a Haab magnet is brought close to the nostrils. A preliminary application of suprarenal extract or of cocain would facilitate the extraction on the living subject. Objects placed in the deeper passages were easily drawn out by means of the magnet through a tracheotomy wound. The most interesting part of his experiments was his successful removal of such objects with a very strong magnet applied to the outside of the chest and slowly moved upward toward the tracheal wound. It was impossible to bring them into the mouth by this means. The conditions were not favorable, owing to the shape of the Haab magnet for this part of the procedure, but he is convinced that improvement of the technique will render it possible to extract a metallic body in a bronchus or in the trachea, through the mouth, with the aid of general narcosis, appropriate position of the patient and fluoroscopy or bronchoscopy. The object can be mobilized perhaps by turning the current on and off in rapid succession, and a flexible metal sound in contact with the large magnet may be inserted in the throat as an extension of the magnet, or the combination of a magnet inside and outside of the throat may be found useful.

28. **Latent Tuberculosis of Tonsils and Adenoid Vegetations.**—Jankelevitch concludes from a review of the literature on the subject that latent secondary tuberculosis of the tonsils is not infrequent, but that the primary latent infection is extremely rare. The cases that have been published as primary were more probably consecutive to some other latent foci. The lesion in the tonsil is usually benign and never leads to ulceration. No instances could be found in the literature of secondary infection of the lungs originating in a focus in the tonsil. Treatment can be only surgical.

33. **Tuberculosis of the Lymph Glands.**—Published originally in Russian. See abstract in THE JOURNAL of August 31, 1901, p. 608.

35. **Diagnosis of Tubercular Peritonitis in Children.**—Ibid.

36. **General Contraction of the Stomach and Jejunostomy.**—Cackovic describes the symptoms of this total shrinking of the stomach as a noticeable inability to eat much food and satiety after a few mouthfuls. The small cavity of the contracted stomach is soon filled and the rigid walls do not stretch nor expel the food into the duodenum. The motor function is performed by the peristalsis of the esophagus alone. When the walls are quite rigid there is no pain, as there are no contractions, but until this stage is reached the pains may be quite severe. Vomiting occurs simply from the overflow. The stools are hard or diarrheic, and bowels very sluggish. Left epigastric region is usually depressed. The impossibility to distend the stomach by insufflation of air or injection of water is the most significant diagnostic sign. After 50 to 150 gm. of water have been poured into the stomach tube the fluid stands in the funnel. In two cases personally observed, the patients were 36 and 60 years old. Both were evidently cases of diffuse malignant degeneration of the stomach walls, although it could not be detected by the naked eye in one, and the microscope showed only a few scattered epithelial cells in the mucous and submucous coats while the muscle exhibited evidences of chronic inflammation. In the other case there was an extensive ulcerative carcinoma, not actually circumscribed. A radical operation or even gastroenterostomy was impossible in either case and jejunostomy was done. The technical and functional results were perfect, but both patients died the seventh day after the operation, the first in progressive collapse, the other from hypostatic

pneumonia of the right lower lobe. He tabulates the details of 77 jejunostomies which he has collected, to sustain his assertion that this is by no means so severe an operation as it is usually considered. It is practicable in every case of general contraction of the stomach; the technique is comparatively simple; it does not expose the patient to more danger than any other palliative operation, and it relieves him from the torments to which he would otherwise succumb much sooner and with much more pain. Ćackovic advocates jejunostomy also in case of severe stenosis of the esophagus, if gastrostomy is impossible; also for carcinoma of the stomach if a major radical or palliative operation is not indicated or not practicable; also for cases of benign stenosis of the pylorus or cicatrices of the stomach in very feeble patients; for gastric ulcer with frequent hemorrhages rebellious to treatment and threatening inanition; for intoxication from a caustic when death is imminent from inanition or rupture, or when no other operation is practicable; in case of insufficiency of the suture after an operation on the stomach, and also when a radical or palliative operation has failed or been only transiently effective. The chief point in treatment of general contraction of the stomach is to determine the amount of food that is tolerated by the patient and not surpass this. His second patient said: "I can eat two spoonfuls all right, but I throw up the third every time." Alimentary injections will be useful adjuvants and also subcutaneous injections of saline solution and possibly of olive oil. The bowels must be systematically regulated with injections and laxatives. Morphin has to be used freely.

37. **Resection of Spleen Under Hemostasis by Steam.**—Sieguireff found steam a most useful aid in the resection on account of a cavernous angioma, of a portion of the spleen, 3 by 6.5 cm. in size. The patient was a previously healthy ii-para of 29. The spleen measured 14 by 11.5 cm., and a hydrosalpinx was also evident. Ligatures tore through the spleen tissue "as if it were butter," but the copious bleeding was completely controlled in twelve minutes by an apparatus which sprayed steam evenly over the entire cut surface at once, combined with the application of a slanting jet of steam to the severed arteries. He was careful to cut the surface in areas corresponding to the scope of his apparatus. When the tissue had turned a brownish green the hemostasis was perfect. The escaping steam, blood, etc., were caught on gauze compresses kept cool by pouring cold salt solution on them. The patient was dismissed cured in two months.

39. **Method of Orchidopexy.**—Hahn has treated a large number of cases of retention of the testis, since 1888, by the method described and the results have been satisfactory and permanent in every instance. The testis is released and brought down to its proper place through a canal made for it, which extends from the cutaneous incision to the lowest portion of the side of the scrotum. It is excavated with the fingers and forceps, and the testis is worked down through this newformed canal until it protrudes through the incision in the skin of the scrotum below. This incision is sutured around the testis, leaving it projecting like a mushroom from the lower portion of the scrotum. A loose bandage is applied for six or seven days. After this interval the last few stitches are taken out and the testis is worked under the skin, which is then sutured over it, and it remains permanently in its new place. The nutrition of the testis did not seem to suffer by the procedure in any instance, except possibly in the case of one very small atrophic testis which continued to shrivel.

44. **Glycolysis.**—Bendix and Bickel state that Lépine's conception of glycolysis as due to the action of a glycolytic ferment secreted by the pancreas, is not sustained by their research. They have found that the alkaline blood is able alone to induce glycolysis, evidently by a purely chemical process, without the coöperation of any ferment. Grape sugar was destroyed in still larger proportion in a .2 or .5 per cent. pure aqueous solution of soda—that is, a fluid as alkaline as the blood. For example, 70 mg. of dextrose mixed with a .28 per cent. solution of soda and kept in the incubating oven for thirty-six hours, diminished to 64 mg. There was a loss of 20 mg. in other tests with a .18 per cent. solution of soda after 240 hours, and of 23 to 33 mg. in a 1.67 per cent. solution after 96 hours. In studying glycolysis the methods of estimating the amount of sugar must be exact, and the possibility that the grape sugar may be decomposed by the action of bacteria in some fermentative process, must be excluded.

46. **Trauma in the Genesis of Tumors.**—Schmieden describes a case of central giant-celled sarcoma of the tibia, the first symptoms of which were observed not long after a contusion of the spot. The trauma caused much pain and temporary inability to walk. In spite of this circumstantial evidence of the traumatic origin of the tumor, he discredits it, and affirms that the tumor could not have come into existence without the presence of the causal germ, no matter how predisposed the soil. Authors have published statistics of 13.4 per cent. tumors of traumatic origin, as in Löwenthal's report; Wolff, 14.3 per cent.; Rapok, 20 per cent.; Mass, 1 per cent., etc., but closer analysis of the cases cited shows that the attempt to trace the tumor to the trauma is very far-fetched, as for instance, Löwenthal's case of a fall from a horse, with no appreciable disturbances, and a gliosarcoma developed in the cerebellum twenty-two years later. Even in the cases of so-called chronic trauma, such as carcinoma of the lip in a smoker, the factors may be more of a chemical than of a physical nature. No evidence has yet been presented, he concludes, which establishes the fact that a trauma is able to call a tumor into being in sound tissue, and for his part, he refuses to admit the possibility.

47. **Colostomy for Chronic Dysentery.**—Nehrkorn describes a case to demonstrate the benefits that can be derived from temporary colostomy in cases of dysentery in which the hemorrhages persist in spite of all internal treatment and the patient is rapidly losing strength, or when the pains and profuse diarrheas are constant, and also when the debility is so extreme that further internal or local treatment becomes impossible. The localization of the intestinal affection determines the character of the intervention. Colostomy on the right side, cecostomy, is the operation when the entire large intestine is involved in the morbid process. It allows the diseased intestine to rest and recuperate. When the affection is limited to the middle portion of the colon, as determined by inspection and palpation during the laparotomy, the diseased portion can be resected and an artificial anus thus be avoided. Colostomy on the left side is indicated in those cases in which the sigmoid flexure is the locus morbi. The aim in this latter intervention is not so much the exclusion of part of the intestine as it is to apply local medication directly to the affected points. This was the intervention in the case described. The patient was a young cigarmaker in Baden, healthy until debilitated by several months of sporadic chronic dysentery with almost incessant small hemorrhages from the intestines. After the failure of internal medication Czerny exposed the flexure, finding it edematous and rigid from infiltration. It was fastened to the wound and two days later was opened. Circumscribed, hyperemic lumps were found in its interior, with two erosions the size of a pfennig, bleeding at the lightest touch. The colon was rinsed out once or twice a day for several weeks with a dilute solution of salicylic acid. A liter and a half could be poured in without trouble. The hemorrhages ceased from the moment of the intervention. Three days afterward castor oil was given. The patient rapidly regained strength and the artificial anus was closed three and one-half months after the operation, and now, three months later, the stools are of normal color and consistency, free from blood or mucus and the patient feels completely well.

49. **Remote Results of Exclusion of Intestine.**—Wiesinger reports the condition of two patients who were operated on more than six years ago by the exclusion of a large portion of the intestines, on account of chronic inflammation of the colon or cecum. The first patient was a woman of 31, and the excluded portion of the intestine included the transverse and descending colon and part of the sigmoid flexure. An artificial anus was made on the right side to allow local

treatment. Later the ascending colon was united to the flexure, and the artificial anus was closed. The patient has carried this long piece of excluded intestine for six years without disturbance of any kind or tenderness at any point. She feels perfectly well, has a good appetite, her bowels act regularly, she has gained in weight and attends to her business as usual. This is the first and only successful case of the kind on record. The second of Wiesinger's patients was a girl of 17 who recovered complete health after the exclusion of the terminal portion of the ileum, the cecum and ascending colon, on account of a tuberculous tumor in the cecum with a fecal fistula. Resection was impossible on account of adhesions. The patient is in good health, has held her position permanently and has recently married. The tumor has retrogressed, but the fistula still persists and has a slight transparent mucous secretion.

51. **Nerve Grafting.**—Dumstrey describes a case of ulnar paralysis in a boy of 10 years, which had persisted for twenty-six months after a fracture of the elbow. As a degenerative process in the nerve was more than probable, he treated the paralysis by grafting the ulnar nerve in an oblique incision in the median nerve after first cutting the ulnar across obliquely. He fastened it in place with a single catgut stitch, and sutured the central stump of the nerve as close to the graft as possible, hoping that it might grow in time to span the gap of 4 cm. Pain was severe at first, and the lips of the wound farthest from the graft became slightly gangrenous. After freshening the lips and suturing afresh the ninth day, the wound healed smoothly. There was tingling, formication and itching in the ulnar side of the hand, and gradually, in the course of several months, the functions of the hand were regained under electricity, exercises, massage and warm baths. The patient was lost sight of before the prospects of the cure had been completely realized. Dumstrey performed a similar operation afterwards on six dogs. The wound became infected in each and the anatomic results were perfect in only two of the animals. In these the nerve fibers had actually grown in and through the graft with no accumulation of tissue. The graft looked like a normal, branching nerve, with scarcely any traces of an operation. He concludes from his experiences that restoration of function should not be anticipated until after several months have elapsed, and also that smooth, primary union of the nerves is indispensable. He does not believe that it is necessary to approximate the nerves so carefully as Gluck advocates, axis cylinder to axis cylinder, etc.

62. **Study of the Heart with the Orthodiagraph.**—Moritz gives sixteen cuts to illustrate the value of the orthodiagraph in determining the outlines of the heart. The Roentgen tube is arranged so that it can readily be moved in any direction in a level plane over the fluorescent screen. The exact points where the rays fall perpendicular to the screen are marked as the tube is moved along. It is thus possible to obtain an exact silhouette of the object, showing its size, shape and position at any time. This orthodiagraphic representation of the heart verifies and controls the results of percussion on the living subject.

64. **Silk Tendons to Correct Deformities.**—Lange improved the technique of tendon transplantation by weaving a thread of silk in the portion of the tendon split off to transplant in the paralyzed tendon, thus strengthening it and allowing more tension. He found he could suture the tendon directly to the periosteum instead of to the paralyzed tendon, thus operating entirely in sound tissue. Later, he discovered that the silk answered completely the purpose of a tendon and that it was unnecessary to slit the sound tendon. He now leaves it intact, weaves some silk threads through it and carries them down to the periosteum below where they are fastened as if forming a branch of the sound tendon. He is thus able to operate in cases in which the defect is too extensive to be bridged by the natural tendon, as well as those in which the tendon is too thin to be divided. The intervention is comparatively insignificant when the silk tendon is used. The strength of the sound tendon is not impaired, and by this means it is possible to make an exaggerated correction without undue stretching of the natural tendon and fear of consecutive necrosis. In a case of paralysis of the peronei and extensor digitorum, for instance, in which the tibialis anticus is too weak to be divided, he weaves two strong silk threads through the tendon of the latter, parallel to the fibers, above the annular ligament. The four ends of the silk thread are passed then through the periosteum of the cuboid bone, weaving them in and out before tying them. Four months afterward the patient is able to move his foot up and down in approximately normal range, without recurrence of the previous deformity. Lange has applied these tendons in 56 cases and primary healing was secured in every instance. The threads tore through twice afterward, from imperfect technique as the angle had not been correctly calculated. There was no suppuration, but the traction from the silk threads woven in the gastrocnemius and fastened in the periosteum of the cuboid bone, was too strong for the soft parts covering them. If a cotton pad had been worn in the shoe, this mishap might have been averted. Some of the silk tendons he has thus made in various patients were 20 cm. long. The functional results have been remarkably perfect, even in case of paralysis of the quadriceps, the most difficult of all operations of the kind. For this, he transplants the biceps and the semitendinosus forward and lengthens them by a silk tendon from each, both joining together and woven into the periosteum of the tibia where they are tied. When the immobilizing cast is first removed the silk can be palpated as when first inserted, but as the limb is exercised, the silk tendon becomes larger and larger, until it feels like a lead pencil instead of a knitting needle under the skin. As it is used constantly in the movements of the parts it does not act like a foreign body, and the healing process proceeds like that of a living tissue. He is able to prove this assertion by a silk tendon removed from the knee after two and a half years of practically normal function, the patient a child who required a second operation for another cause. The silk tendon was 12 cm. long and had become encased in a sheath of normal tendon tissue whose walls were 2 or 3 mm. thick and whose lower end blended like a normal tendon with the periosteum of the tibia. A microscopic section of the new-formed tendon showed normal parallel arrangement of the fibers and normal structure throughout. Among his most gratifying successes is the case of a boy of 15 with all the muscles of both legs paralyzed except the quadriceps in one and the biceps, semitendinosus and extensor digitorum in the other. He was unable to walk or even stand. One year after the operations he was able to walk without an apparatus. Another patient was a young woman of 22 with paralysis of all the muscles of the legs except the quadriceps in the left and the biceps and tensor fasciæ in the right. Walking and standing were impossible, but now, a few months after the intervention, and for the first time in seventeen years, she can stand without mechanical support and is able to walk with merely the aid of two canes.

65. **Gelatin Injections as a Cure for Melæna Neonatorum.**—Holtschmidt states that 50 per cent. terminated fatally of the 14 cases of melæna neonatorum occurring at the Woman's Clinic at Dresden during the years from 1894 to 1900, in the course of 14,203 childbirths. In 1901 every case—5 in number—was treated by subcutaneous injection of about 15 c.c. of a 2 per cent. solution of gelatin, in the chest or thigh, in two places. The hemorrhages were at once arrested in 3 of the infants; 1 required a second and 1 a third injection before the cure was complete. All recovered. No other styptic was applied, not even the precaution of cooling the milk. The gelatin was always absorbed without reaction. He concludes from his experience that in case of excessive loss of blood the injection should be repeated again the same day until the hemorrhages are definitely arrested. In order to avoid all danger of injecting germs with the gelatin he prepares the solution by adding 20 gm. of ordinary gelatin to a liter of physiologic saline solution, plugging the bottle with cotton and boiling it in the water bath for five or six hours.

The bottle is then set aside and the mixture hardens. Liquefaction of the hardened gelatin would suggest the presence of germs, and the permanently unaltered appearance of the contents of the bottle is the best guarantee of its purity.

66. **Treatment of Rupture of the Uterus.**—Wiener advocates laparotomy and suture of the ruptured uterus as soon as possible. In places where a hospital is accessible the patient should be carried there for the operation. He describes two cases, both terminating in recovery. Tampons were applied at once, internally and externally, and by this means the hemorrhage was checked and the patients were able to stand a ride of one or two hours to the hospital. In one of the cases the rupture was evidently spontaneous, due to the contraction of the uterus in severe labor. The organ contracted after the rupture and the head of the fetus acted like a tampon, so that there was no hemorrhage until after the extraction of the hydrocephalous child. Wiener believes that the cavities should be wiped and cleaned with dry compresses. The application of fluids spreads the germs over a larger surface, whereas under dry cleaning, if any inflammation follows it is restricted to a small area.

68. **Esophagoscopy, Gastroscopy and Celioscopy.**—The instrument which Kelling uses for endoscopy of the alimentary canal is constructed on the principle of his little finger, he remarks, only instead of three joints the instrument has twenty. Like the finger, it is covered with a soft sheath of rubber. The introduction into the esophagus or stomach of this flexible tube is no more aggressive than the introduction of the stomach tube or sound. After it is in place, a stiff guide is worked into it, as the success of endoscopy of this kind depends on bringing the mouth and esophagus into a straight line, which is easily accomplished. The incandescent lamp and lenses are then introduced with a spiral motion imparted by a wheel above. The gastroscope differs from the esophagoscope only in that the lower end is bent at an angle to keep it away from the posterior wall of the stomach. The chief value of endoscopy is the early differentiation of carcinoma and the removal of foreign bodies. He relates a number of instances in which this differentiation was of inestimable benefit. In four cases in which the symptoms suggested incipient malignant disease, endoscopy revealed the integrity of the organs and indicated the nervous origin of the troubles or located them in an adjacent organ. In other cases it revealed a diverticulum, a syphilitic ulceration or mere spasm. In one case in which it established spasmodic contraction as the cause of the troubles, several physicians had previously diagnosed the case as carcinoma. For endoscopy of the abdominal cavity he first anesthetizes with Schleich's solution; then inflates the cavity through a Fiedler trocar and then inserts the smallest sized Nitze cystoscope through a second trocar. The viscera can thus be seen and palpated under the control of the eye. This method of celiotomy is aseptic, free from pain or danger and can be applied "ambulant."

71. **Connection Between Sciatica, Meralgia and Flat Foot.**—Pal describes a number of cases out of his large experience in which the patients exhibited symptoms of sciatica or meralgia or both, rebellious to all local treatment, and finally traced to an acquired talipes valgus. Appropriate treatment of the latter banished the pseudo-sciatica. No symptoms attracted attention to the foot in many of these cases. A young army officer, for example, applied for relief from intense pain in the right hip. The sciatic nerve was not sensitive to pressure but the pains involved the entire gluteal region, with slight paresthetic meralgia. Investigation showed that the patient had a flat foot which had been duly corrected for years, but he had laid aside the special footgear and had been wearing ordinary boots for the last four weeks. Return to his corrected shoes permanently banished the pains. Another case was a man of 45, subject to renal calculi. Violent pains suddenly appeared in the lumbar and gluteal region, attributed by the physician to new calculi. The patient was sent to Carlsbad where energetic local treatment of the supposed sciatica was undertaken. He returned in time, the pains still unmodified, and Pal then examined the feet and found pronounced flat-foot. Appropriate shoes corrected the condition and banished the pains. Two patients were cooks. The sciatic nerve is very little if at all sensitive in these cases. Treatment should aim to cure the contraction in the foot before the mechanical correction can be applied. Rest in bed, massage, moist compresses and gymnastic exercises are all important preliminaries to successful treatment. The position of the foot can be corrected with adhesive plaster strips in most cases, preparatory for the special shoe. The pad or special sole must be adapted to the individual case and hold the foot in perfect supination.

74. **Maggots in the Alimentary Canal.**—Schlesinger applies the term myiasis gastro-intestinalis to cases in which living maggots or flies are found in the contents of the stomach or intestines. They may occur once or repeatedly, and thus the resulting affection may be acute, subacute or chronic. Acute myiasis usually passes over without any characteristic symptoms unless, perhaps, the exceptional intensity of the pains. In some chronic cases no symptoms were noted. In one case pains and diarrhea recurred at intervals for years, but subsided each time after expulsion of a large batch of maggots. The expulsion was favored by kneading massage of the abdomen. The symptoms resembled those of a mucous colitis or membranous enteritis or merely an atypical dysentery. All the cases on record—about 100 in number—exhibited a comparatively long period of incubation before the first larvæ were expelled from the stomach or rectum, during which time various symptoms had called attention to the existence of some gastro-intestinal affection. This period of incubation ranged from a few weeks to several years in different cases. A remarkable feature of the cases was the peculiar expulsion *en masse* of the maggots. They were never found singly. Schlesinger explains this phenomenon by the colonization of the maggots in some comparatively limited space in the intestines. Some injurious influence may affect the entire colony and drive it out, while other colonies may persist undisturbed elsewhere. Another feature is the appearance of blood in the stools or vomit. This blood is probably derived from lesions of the intestinal walls caused by the direct action of the larvæ, similar to the hemorrhages in anchylostomyiasis. Migraine and neuralgic pains in side and back, or even in legs and knees, are frequent symptoms.

78. **Treatment of Fissure of the Anus.**—Gussenbaur relates the particulars of 23 male and 24 female patients whom he cured of painful fissure of the anus by merely stretching the anus until the cramp was abolished. The patient in profound narcosis, he inserts one forefinger very carefully into the anus, and then the other forefinger, then exerts gentle traction until the cramp is overcome and the sphincter becomes relaxed. The fissure may be slightly enlarged by the procedure. The anus is then wiped dry with sterile cloths and the fissure is merely dusted with iodoform or tamponed with iodoform gauze. As the patient recovers from the narcosis he experiences pain for one or two hours. After this time all pain ceases and he is permanently freed from all his previous discomfort at one stroke. The fissure heals completely in a few days to one or two weeks, unless possibly delayed by complications. Continence is restored after a few days. If general narcosis is contra-indicated, the dilatation can be accomplished without it. Local anesthesia is ineffective. This method of treatment, first introduced by Recamier, far surpasses all others in the certainty of the cure and the rapid healing of the fissure. Gussenbaur's experience has been much more extensive than the 47 cases described. He has never known any inconvenience to result.

83. **Operative Intervention for Perityphlitis.**—Zeidler believes in operating in the first stage of the process, during the catarrhal period, whether merely simple catarrhal appendicitis, or the ulcerative, parenchymatous or obliterating variety, or empyema of the appendix, chronic or latent. During the acute stage of perityphlitis he operates only when there seems to be no tendency to absorption of the inflam-

matory infiltrate and suppuration, and the suppuration is not becoming circumscribed. He would also operate at a later stage if there is a tendency to recurrence.

85. **Serodiagnosis of Tuberculosis.**—Kazarinoff has been investigating the agglutinating reaction in 73 patients with tuberculosis and in 11 healthy subjects. The tests were negative in the latter in all but 2, and one of these has exhibited evidences of a tubercular affection since. The specific agglutinating reaction occurred in the tuberculous 73, the intensity dependent upon the stage of the development of the tuberculosis, its course and on the strength of the organism affected. He unconditionally confirms the assertions of Arloing and Courmont in regard to the value of this means of differentiating tuberculosis.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

AMERICAN EDITION OF NOTHNAGEL'S ENCYCLOPEDIA.—Variola (Including Vaccination), by Dr. H. Immermann, of Basle. Varicella, by Dr. Th. von Jürgensen, of Tübingen. Cholera Asiatica and Cholera Nostras, by Dr. C. Liebermeister, of Tübingen. Erysipelas and Erysipeloid, by Dr. H. Lenhartz, of Hamburg. Whooping Cough and Hay Fever, by Dr. G. Sticker, of Giessen. Edited, with additions, by Sir J. W. Moore, B.A., M.D., F.R.C.P.I., Professor of the practice of Medicine, Royal College of Surgeons, Ireland. Handsome octavo volume of 682 pages, illustrated. Cloth. Price, $5.00 net. Philadelphia and London: W. B. Saunders & Co. 1902.

THE MEDICAL NEWS POCKET FORMULARY, New 4th Edition. Containing 1700 prescriptions representing the latest and most approved methods of administering remedial agents. By E. Quin Thornton, M.D., Demonstrator of Therapeutics, Pharmacy and Materia Medica in the Jefferson Medical College, Philadelphia. New 4th edition, carefully revised to date of issue. Pp. 287. In one wallet-shaped volume, strongly bound in leather, with pocket and pencil. Price, $1.50 net. Philadelphia and New York: Lea Brothers & Co. 1902.

ON THE CURE OF THE MORPHIA HABIT WITHOUT SUFFERING. With a Note on the Physiologic Method of Relieving the Craving for Drink. By Oscar Jennings, M.D. (Paris), M.R.C.S. (Eng.), Fellow of the Royal Medico-Chirurgical Society. Second Edition, Revised and Enlarged. Cloth. Pp. 211. Price, $1.50. New York: Wm. Wood & Co. 1901.

OUTLINES OF PHYSIOLOGY. By Edward Groves Jones, M.D., Lecturer on Physical Diagnosis in the Atlantic College of Physicians and Surgeons, and Professor of Physiology in the Dental Department of the same. With 107 illustrations. 12mo. Pp. 400. Price, $1.50 net. Philadelphia: P. Blakiston's Son & Co. 1901.

THE POCKET GRAY, or Anatomist's Vade-Mecum. By the Late Edward Cotterell, F.R.C.S., Fifth Edition, Revised and Edited by C. H. Fagge, M.B., M.S. Lond., F.R.C.S., Senior Demonstrator of Anatomy, Guy's Hospital. Twentieth Thousand. Cloth. Pp. 269. Price, $1.25. New York: Wm. Wood & Co.

ELEMENTARY OPHTHALMIC OPTICS. Including Ophthalmoscopy and Retinoscopy. By Herbert Parsons, B.S., B.Sc., F.R.C.S., Curator, Royal London (Moorfields) Ophthalmic Hospital. Large, 12mo. Pp. 162. Price, $2.00 net. Philadelphia: P. Blakiston's Son & Co. 1902.

ALCOHOLISM, A Study in Heredity. By G. Archdall Reid, M.B., C.M., F.R.S.E., Author of "The Present Evolution of Man." Cloth. Pp. 293. Price, $2.50. New York: Wm. Wood & Co. 1901.

New Patents.

Patents of interest to physicians, December 31 and January 7:

690,094. Hernial truss. Karl Beyer, Cologne, Germany.

689,955. Car for disinfecting apparatus. Wm. H. Francis, Philadelphia.

689,957. Portable disinfecting apparatus. Wm. H. Francis, Philadelphia.

689,972. Syringe. Alcinous B. Jamison, New York City.

690,154. Device for testing eyes. Christian F. Kantlehner, Chelsea, Mich.

690,299. Fumigator. Joseph Konig, Gaggenan, Germany.

689,987. Nursing nipple. David Pick, Salzburg, Austria-Hungary.

690,080. Producing quinate or urea. Otto Schutz and G. Dallmann, Gummersbach, Germany.

690,337. Disinfecting apparatus. Isaiah W. Willits, Bloomsburg, Pa.

35,516. Design, nipple. Adnah McMurtrie, New York City.

35,497. Design, invalid cushion. Christian W. Meinecke, Jersey City, N. J.

35,498. Design, blank for ear speculum blades. Hercules Pedretti, Philadelphia.

690,844. Combined spring-bed and invalid chair. James H. T. Edwards, Sanford, S. C.

690,724. Making acetone. Josef L. Hawliczek, Liverpool, Eng.

11,960. Re-issue, salicylic ether of quinin. Fritz Hofmann, Elberfeld, Germany.

690,866. Apparatus for disinfecting sewer vaults. Wm. Martin, Chicago.

690,867. Compound for disinfecting purposes. Wm. Martin, Chicago.

690,827. Nasal distender. Wm. Moores, New York City.

690,759. Sterilizer for surgeons' use. Chas. E. Norton, Lewiston, Maine.

690,624. Hernial truss. Lucius A. Smith, Topeka, Kan.

The Public Service.

Army Changes.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., Jan. 9 to 15, 1902, inclusive:

John M. Banister, major and surgeon, U. S. A., in addition to the duty with the troops on the transport *Buford*, required of him by former orders, is assigned to duty as transport surgeon on that transport during the voyage from New York City to the Philippine Islands.

Charles C. Billingslea, contract surgeon, from Westminster, Md., to San Francisco, Cal., en route for assignment in the Division of the Philippines.

Edward C. Carter, major and surgeon, U. S. A., member of a retiring board at Washington, D. C.

Louis W. Crumpton, major and surgeon, U. S. A., from San Francisco, Cal., to Washington, D. C., to report to the Surgeon-General of the Army for instructions.

Peter R. Egan, major and surgeon, U. S. A., from Fort Douglas, Utah, to San Francisco, Cal., en route for duty in the Division of the Philippines.

Robert C. Eve, contract surgeon, leave of absence for one month granted.

Henry M. Hall, contract surgeon, from the transport *Buford*, to duty on the transport *McClellan*, January 11.

Paul S. Halloran, lieutenant and asst.-surgeon, U. S. A., leave of absence extended.

James B. Hallwood, contract surgeon, now at San Francisco, Cal., is relieved from further duty in the Division of the Philippines and assigned to temporary duty in the General Hospital, Presidio of San Francisco, Cal.

Richard W. Johnson, major and surgeon, U. S. A., from duty in the Division of the Philippines to Fort Douglas, Utah.

George B. Jones, contract surgeon, from Rushville, Ind., to San Francisco, Cal., en route for duty in the Division of the Philippines.

John S. Kulp, captain and asst.-surgeon, U. S. A., attending surgeon and examiner of recruits at New York City, to report in person to the Surgeon-General of the Army on official business, and thereafter to return to his proper station.

William A. McVean, contract surgeon, from the General Hospital, Presidio of San Francisco, to Manila, P. I., for assignment in the Division of the Philippines.

James C. Merrill, major and surgeon, U. S. A., member of a retiring board at Washington, D. C.

Guy Stone, contract surgeon, now at San Francisco, Cal., is relieved from further duty in the Division of the Philippines and assigned to temporary duty in the General Hospital, Presidio of San Francisco, Cal.

William J. Wakeman, major and surgeon, U. S. A., from the Division of the Philippines to San Francisco, Cal., where on arrival he will report by telegraph to the Adjutant-General of the Army for orders.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending January 18:

Asst.-Surgeon J. H. Payne, detached from the *Isla de Cuba*, and ordered home.

Surgeon I. W. Kite, ordered to the Norfolk Navy Yard.

Surgeon H. T. Percy, detached from the Norfolk Navy Yard, and ordered to the Navy Yard, League Island, for duty with the Naval Recruiting Rendezvous, Philadelphia.

Surgeon W. F. Arnold, detached from the *New Orleans*, and ordered to Guam.

Asst.-Surgeon J. T. Kennedy, detached from the *Brooklyn* and ordered to the *Helena*.

Asst.-Surgeon J. W. Backus, detached from the *Brooklyn* and ordered to the *Princeton*.

Asst.-Surgeon R. C. Holcomb, detached from the *Helena* and ordered to the *Manila*.

Asst.-Surgeon R. W. Plummer, detached from the *Princeton* and ordered to the *New Orleans*.

P. A. Surgeon B. R. Ward, detached from the Boston Navy Yard and ordered to the *Constellation*.

P. A. Surgeon W. C. Braisted, detached from recruiting duty and ordered to the Naval Hospital, New York.

P. A. Surgeon J. C. Pryor, detached from the Naval Hospital, New York, and ordered to the Naval Hospital, Newport, R. I.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ended Jan. 16, 1902:

Surgeon A. H. Glennan, detailed to represent the service at the meeting of International Sanitary Conference at Havana, Cuba, February 15.

P. A. Surgeon G. M. Guiteras, detailed to represent the service at meeting of International Sanitary Conference at Havana, Cuba, February 15.

Asst.-Surgeon C. E. Decker, granted leave of absence, on account of sickness, for thirty days from January 15.

Asst.-Surgeon C. H. Lavinder, bureau letter of January 2, 1902, granting leave of absence for two days, amended so that said leave shall be for one day only.

A. A. Surgeon R. C. Craig, to report to Surgeon F. W. Mead for duty.

A. A. Surgeon C. B. Sweeting, granted leave of absence for five days from January 23.